MAY 29 1959

NATIONAL FISHERMAN

MAY
1959

It's Columbian Polyethylene! The **Lady Kossie,** newest shrimp trawler built by Diesel Engine Sales, Inc., is rigged with Columbian Polyethylene Rope, particularly water-resistant and with an exceptionally high breaking strength. People who want the best say, "Columbian!"

It's now 800 Shrimp Trawlers carrying COLUMBIAN Rope

The 800th shrimp trawler launched by Diesel Engine Sales, Inc., of St. Augustine, Fla., is rigged with Columbian rope — and the 799 other trawlers built by Diesel for the Florida fishing fleet also carried Columbian rope as original equipment. That's repeat business, made possible only by the outstanding performance always given by Columbian Rope.

Fishermen everywhere know the quality of Columbian Rope in net rope, purse line, trawl line, drag rope, pot warp — there's a Columbian Manila Rope for every fishing purpose. Also, polyethylene, nylon and Dacron ropes for longest wear and highest breaking strength. For full information, write Columbian Rope Co., Auburn, N. Y.

COLUMBIAN Rope Company

Auburn, "The Cordage City," New York

CAREFUL, PLEASE,

of underseas cables

A plea to fishermen for greater caution in areas where underseas cables lie on the ocean floor was the theme of the Bell System exhibit at the recent National Fisheries Institute Convention.

The danger is that fishing gear can become entangled with these cables and cause breaks. Result: everybody suffers.

You suffer loss of your gear, your catch, your time.

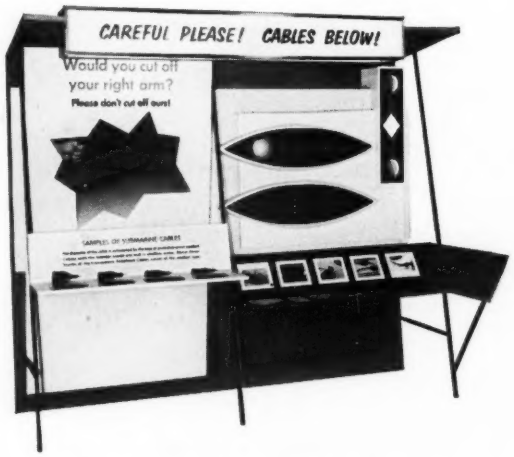
The public suffers because of delayed overseas communications. Hundreds of thousands of dollars are involved.

Here is how you can help:

1. Carefully check underseas cable areas before you begin trawling. Write for free maps and literature if you did not attend the convention, or if you need more copies. The address: American Telephone & Telegraph Co., 32 Avenue of the Americas, New York 13, N. Y. Attention: General Manager, Special Projects.

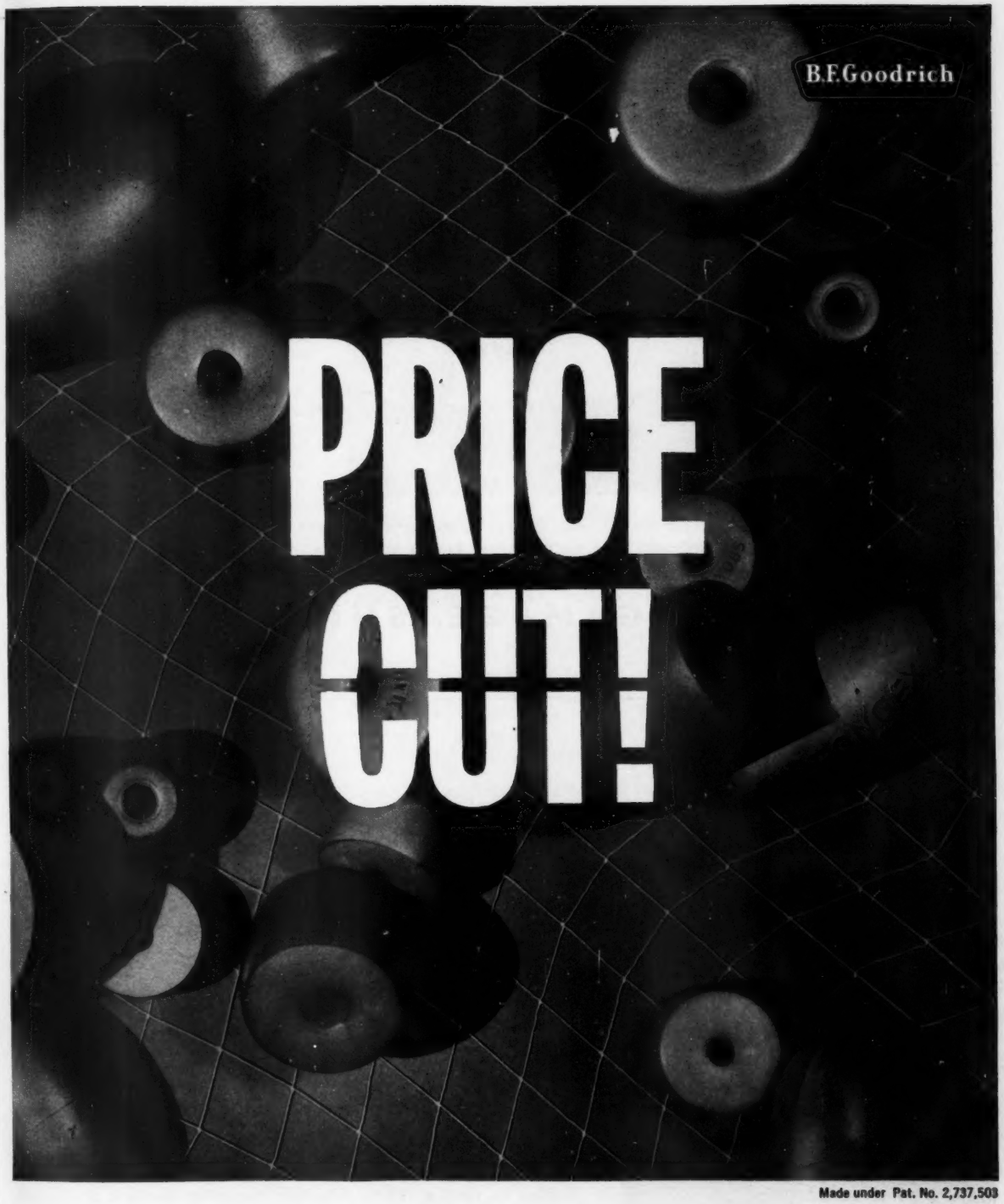
2. Don't drag nets or drop anchors or other heavy gear within cable areas shown on our maps.

3. Avoid starting trawling runs that may cross cables. If you lose or damage any gear in avoiding injury to an underseas telephone cable, the Bell System will pay you for this equipment on submission of proper proof.



Bell System booth at the National Fisheries Institute Convention in New York stressed caution and safety. Conventioneers received free maps and literature.

BELL TELEPHONE SYSTEM

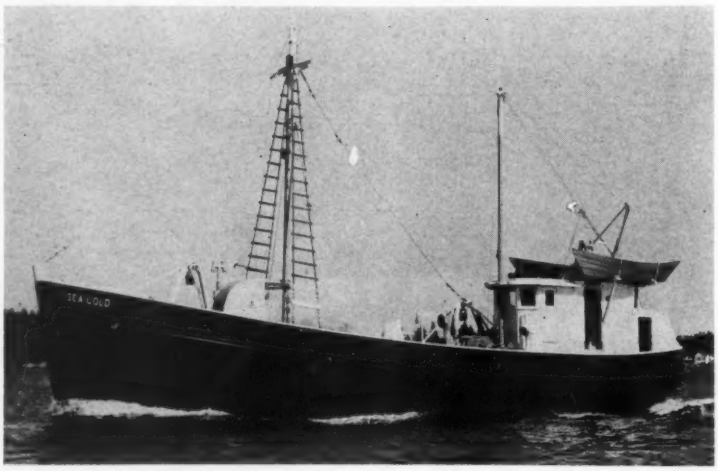


Made under Pat. No. 2,737,503

New, lower prices on the best float around! Check your supplier now on the 17 sizes and shapes available for purse seining and gill netting. The B. F. Goodrich Company, 592 Derby Place, Shelton, Connecticut.

B.F.Goodrich ***Spongex seine floats***

14th Dragger from the Same Model!



The 71-Foot
SEA GOLD
of New Bedford

•

A Ruggedly-Built
Fishing Vessel

Proven in Service
for both
Dragging and
Scalloping

At Gamage's you will find unexcelled facilities for building all types of wooden vessels up to 140 feet, under cover. There are two covered building ways, with overhead cranes for installing machinery. Your new boat can leave Gamage's completely equipped, ready to fish.

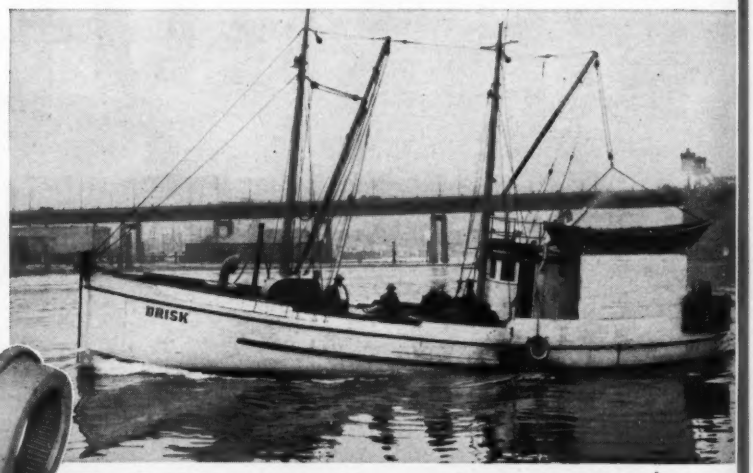
HARVEY F. GAMAGE, SHIPBUILDER

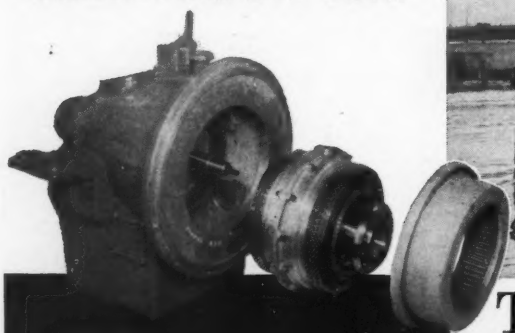
SOUTH BRISTOL, MAINE

"A Good Place to Build a Good Boat"

"BRISK"

. . . A REAL MULTI-PURPOSE BOAT





USING
"The CAPITOL"
HYC HYDRAULIC
REVERSE AND
REDUCTION GEAR

The "Brisk" is a true multi-purpose boat, being used for dragging . . . for halibutting . . . and for Albacore fishing. For power, Capt. Nels Forstad picked a 190 HP Allis-Chalmers Buda Diesel Engine to turn a 50x43" Olympic propeller through a Capitol HYC 3.88 to 1 Hydraulic Reverse and Reduction Gear.

For smooth performance—fast change from full forward to full reverse in 3 seconds—for maneuverability—and long, trouble-free life—Capitol Gears are preferred by experienced boat owners. Make your next gear . . . a Capitol Gear! Available in ratios—1½:1; 2:1; 2½:1; 3:1; 3½:1; 4:1 and 4½:1.

Send us details of your gear needs. We'll gladly make recommendations based on 52 years of experience.

CAPITOL GEARS

AUTO ENGINE WORKS, INC.
333 (A) N. Hamline Avenue
St. Paul 4, Minnesota

The Lookout

An Economic Approach

Some interesting comments on the economic and conservation aspects of the fishing industry were made at last month's annual meeting of the Fisheries Council of Canada. In reviewing the activities of his department, Federal Fisheries Minister, Angus MacLean, stated:

"It is essential that economics should be assessed when considering proposals for fisheries management policies or regulations, whether in fields of resource development, utilization, quality inspection, or industrial development. But here again, it is not always easy to make quick studies of the economics so that the information is readily available as a guide for management.

"The economics side of the Department's operations is becoming increasingly important, particularly when considered in the light of the increased fishing pressure by the foreign fishing fleets. The officials of the Department have been giving considerable thought to the problem of how to cope with the need for better and more advanced information on the economics of the fisheries, in order that the fisheries management policies and regulations can be assisted.

"The economics of the fishery and the industry generally must be studied simultaneously with the scientific investigations. Indeed, in many cases the economic studies should be made in advance of any implementation of plans and programs for scientific investigations whether biological or technological The balance and priorities between immediate and long-term studies must be borne carefully in mind".

In his presidential address, H. D. Pyke of Lunenburg, N. S., told the Fisheries Council of Canada:

"We all recognize the need for conservation in limited areas in order to preserve certain species of fish, but are all our efforts toward conservation blinding us to the enormous potential of the sea? Considering the fact that the oceans cover almost three quarters of the earth's surface, maybe we are approaching the time for more systematic exploitation of the resources of the sea.

"Our research workers do an excellent job to increase our knowledge of the seas and the areas in which we have been fishing for many years, but we have had very little, if any, systematic explorations of new areas. If international cooperation can be secured for the conservation of existing stocks of fish, surely an investigation of the seas could be planned on an international basis."

NATIONAL FISHERMAN

The Fishing Industry Magazine

Vol. 40 No. 4 May 1959

CONTENTS

How Can Salmon Stocks Be Maintained?	9
Quality is Keynote of Fisheries Convention	10
Steel Dragger "Cap'n Bill III" Treated Against Rust	12
Air Curtain Concentrates Maine Herring	13
Appeals Court Stays Order Banning Alaskan Fish Traps	14
Patrol Boat Skipper Serves Michigan for 31 Years	17
Maine Canners Get Report on Sardine's Food Value	18
New 71-Foot Dragger "Sea Gold" Fishing from New Bedford	19
67-Foot "Miss Point Judith" is Combination Dragger-Seiner	21
Maryland Signs New Treaty on Joint Use of Potomac	24
Florida Leaders Oppose New Tortugas Shrimp Bill	25
Antibiotics Use Authorized for Commercial Fishermen	26
Approve Texas Shrimp Conservation Bill	27

REGIONS

North Atlantic	18
South Atlantic	24
Gulf of Mexico	27
Great Lakes	17
Pacific Coast	14

DEPARTMENTS

Fishery Progress	6
Equipment & Supply News	34
Boat Catches	37
Where-to-Buy Directory	40
Foreign Bailings	41
Boat & Gear Mart	42

P. G. LAMSON, President — GARDNER LAMSON, Publisher and Editor — D. M. STRICKLAND, Managing Editor

Publication Office: National Fisherman, Goffstown, N. H.—Hyacinth 7-4821

Formerly Atlantic Fisherman, Established 1919. Published monthly by Atlantic Fisherman, Inc.

Member: National Business Publications and Business Publications Audit of Circulation

Pacific Representative: Murray Bothwell, 234 E. Colorado St., Pasadena 1, Cal.—Ryan 1-9155

Accepted as Controlled Circulation Publication at Manchester, N. H.

Yearly subscription rates: United States, $4; Foreign, $6. Single copies, 50¢

TITAN-TITE®

EPOXY SURFACING COMPOUND For Strong, Permanent Repairs

CHARLIE M.

"There's never been anything like these epoxy resins for holding power. You can repair and strengthen almost anything in wood or metal on your boat and gear.

"TITAN-TITE Epoxy Surfacing Compound is a paste that can be brushed on. It's a mighty strong adhesive when used alone, but, when combined and reinforced with Fiberglas* tape, a repair becomes even stronger than before the damage. Use this stuff on a rotted area or a broken part.

"There's almost no limit to the ways you can use TITAN-TITE Epoxy Surfacing Compound and Fiberglas* tape for keeping your boat and gear in shape. For instance, a dab of the compound on the end of a line will prevent fraying. Or, you can wrap a spar with Fiberglas and, together with the compound, make it as strong and as good as new. Once you have tried these materials, you'll find many other things to use them on.

"Your marine dealer has this TITAN-TITE EPOXY SURFACING COMPOUND or can get it for you."

GLASS PLASTICS CORPORATION

1605 West Elizabeth Avenue
Linden, New Jersey

*TM—OCF

FISHERY PROGRESS

► 1958 Catch Value Rises

The domestic fish catch in 1958 had a value to fishermen of a record $370 million, an increase of $19 million over the previous year. The catch totaled 4.72 billion pounds for 1958, showing a decrease from 1957. The per capita consumption was 10.4 pounds, or .3 pounds higher than in 1957.

The Atlantic coast produced 53 percent of the domestic catch or 2,502 million pounds. Other producing areas show the Pacific coast at 904 million pounds, the Gulf coast with 780 million pounds, Alaska producing 380 million, and the Great Lakes and Mississippi River, 150 million.

San Pedro again led all ports in poundage and value of fish landed with 380 million pounds. This was principally tuna, Pacific sardines and mackerel, valued at $27,900,000.

Lewes, Delaware, was second in poundage with nearly 271 million pounds, mostly menhaden. Reedville, Virginia lists 248 million. Data from other ports show Gloucester, Mass., with 230 million pounds valued at $8 million; San Diego, Cal. at 124 million pounds with a value of $17 million; Boston, Mass. landing 124 million for $12.6 million; New Bedford, Mass., taking in 112 million at a value of $13.8 million; Portland, Me. 62 million pounds valued at $2.2 million; and Rockland, Me., 49 million at $2 million.

► Salmon Embargo Hearing

The Merchant Marine and Fisheries Subcommittee was scheduled to hold hearings the first of May on legislation to halt the importation of salmon from Japan.

The Sub-committee hearings were held in April at Seattle, Wash. and Juneau, Alaska. Industry representatives urged at the time that Japanese salmon imports be banned until a solution satisfactory to the American industry is found for the Bristol Bay salmon fishery.

► Cooperative Research Bill

A bill which would authorize the Secretary of the Interior to permit the Fish and Wildlife Service and other agencies within his department to enter agreements with colleges, universities, the States, and private organizations, has been submitted to the Committee on Merchant Marine and Fisheries. The bill would allow such agreements for the purpose of conducting research, training, and demonstrational programs.

► Industry Investments

The domestic producers of fish have $411,500,000 invested in boats and $89,000,000 invested in fishing gear. The fisheries provide employment for 142,000 fishermen and transporters and 97,000 persons in wholesale and manufacturing establishments.

A total of $242,600,000 is invested in freezing and processing plants and $217,600,000 in wholesale fish houses. The value of the facilities for handling fish at the retail level is placed at $111,000,000. The grand total investment on the basis of these data is $1,071,700,000.

► Interior Appropriations

The Department of the Interior and Related Agencies Appropriation Bill, contains appropriations for the fiscal year 1960. Included are funds for the Fish and Wildlife Service and its two bureaus.

The House Committee on Appropriations report recommends funds totaling $9,498,000 for the Bureau of Commercial Fisheries. This is an increase of $2,872,000 over 1959 but less than the budget estimate by $1,673,200.

The Committee recommended $5,928,000 for management and investigation of resources. The figure represents a decrease of $23,000 from the 1959 appropriation. The reduction results from a change in the proposed method of financing which the Committee feels will not effect the planned level of operation. That is, except for the required absorption of $35,000 of the Pay Act costs and a decrease of $30,000 for the administration of the Fishing Vessel Mortgage Insurance Program request.

Increases allowed include $185,300 for additional research including insecticide studies, $50,000 for administration of the Fishing Vessel Mortgage Insurance Program, $271,050 to shift financing of certain research projects from permanent to direct appropriation basis, and $320,000 for Pay and Act costs.

The budget estimate of $245,000 is recommended by the Committee for construction. The major project to be financed in 1960 is the installation of a salt-water system for experimental research at the Galveston, Texas laboratory.

The Committee has allowed the budget request of $3,000,000 for the Fisheries Loan Fund, to provide additional capital to continue loans for the operation, maintenance, replacement, and equipment of fishing gear and vessels. A sum of $325,000 has been allowed for general administrative expenses.

► Fisheries Assistance

The Fisheries Sub-committee of the House Merchant Marine and Fisheries Committee received four hours of testimony during three sessions, recently, on the proposed Federal Fisheries Assistance Act.

Testimony opened with a statement urging prompt, favorable action by the subcommittee on the legislation which would provide a construction differential subsidy for fishing vessels similar to the program which other maritime interests have had since 1936. It would also provide a $5 million soft loan program for fishery processors in distressed areas.

The Department of the Interior's position as presented by Donald L. McKernan, director of the Bureau of Commercial Fisheries, favors the soft loan provision. But, it would strike out the construction differential subsidy section and substitute provisions allowing fishing vessels to be purchased from and built in foreign shipyards. This change has met with strong opposition.

► Assistance Act Revised

Senators Saltonstall and Kennedy of Mass., Mrs. Smith, Muskie of Maine and Magnuson of Wash. are the co-authors of a revised fisheries assistance program. Similar measures have been introduced in the House.

Excluded from the new legislation are provisions which would require the aid of the act be available only to such segments of the industry that had been denied "Escape clause" relief. As revised, it would apply to the entire industry.

Also excluded is a proposal for a construction differential for repairing fishing vessels. The new legislation limits the differential to new construction.

Outright grants for plant modernization are excluded, as are the subsidy incentive payments to processors, vessel owners, and fishermen as were contained in the earlier legislation.

► Lab Clams to Europe

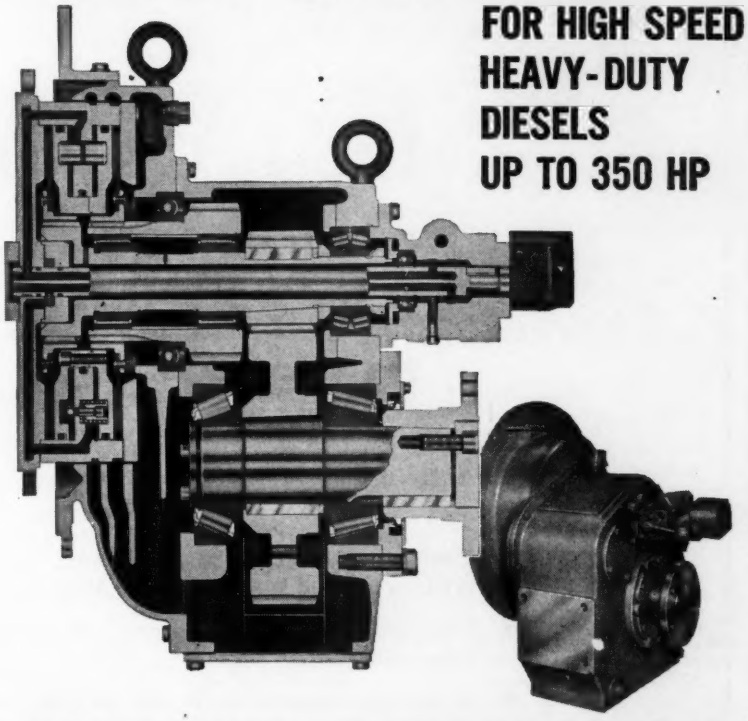
Recently, approximately 100,000 hard clams, raised in tanks at the Milford, Conn., U. S. Fisheries Laboratory were shipped to England and France to be tested there.

About 25,000 clams in each shipment were comparatively large individuals. It is now possible for the laboratory to produce large quantities of clams under controlled conditions. The work is serving as a pilot plant for possible commercial clam operations.

One commercial clam hatchery has already started operations in Virginia, and another is being considered on Long Island. It is believed possible that a substantial part of clams produced 20 years from now will be from enterprises of this type.

NEW S-N SERIES 3940

FOR HIGH SPEED HEAVY-DUTY DIESELS UP TO 350 HP



the completely modern marine gear . . .

yet PRICED LOWER

than other gears of equal capacity

Now, tested and proven, the new S-N 3940 Series has wide application for marine propulsion engines. **LowEST** — in price for any gear of comparable capacity . . . **SimplEST** — with fewer moving parts . . . **LightEST** — for transmitted horsepower . . . **ShortEST** — as much as 9" shorter than other gears in its range . . . Transmits full power continuously in forward or reverse at all engine speeds . . . Wide selection of gear ratios from 2:1 to 4.4:1. Contact your S-N distributor or write The Snow-Nabstedt Gear Corporation, Hamden, Connecticut for more complete information.

YOUR BEST BUY IN DEPENDABLE GEARS

SNOW-NABSTEDT

Transmission Engineers

FOR OVER HALF A CENTURY

since 1784

LINEN THREAD

announces SWEEPING CHANGES to serve you better!

These changes, now in effect, will result in major advantages to you. They include:

- **Concentration of all manufacturing at our large, modern mills in Blue Mountain, Alabama.**
- **Centralized sales management and service in Blue Mountain.**
- **A new merchandising concept to bring added vigor and scope to our service and product line.**
- **An improved sales organization, with warehouse stocks and sales service centers in strategic cities.**

These developments provide for greater values from our company, faster deliveries, important improvements in service. Implementing them is a select corps of Linen Thread's ablest executives... men you can look to for continuing the great Linen Thread traditions of quality at economical prices.

SWEEP NEW PROFITS FROM THE SEA WITH LTCO PRODUCTS FOR COMMERCIAL FISHING

Barbour's Nylon Seine and Gill Netting • Gold Medal Cotton Seine Netting, Seine Twines in Cotton and Nylon • Nyak Netting and Seine Twine • Knox's Knotless Nylon Netting • Netset, perfected netting preservative.

THE LINEN THREAD CO., INC.

BLUE MOUNTAIN, ALABAMA

Salmon trolling boats at Petersburg, Alaska.

How Can Salmon Stocks Be Maintained?

More Effective Conservation Measures on International Level Needed

ALONG the Pacific Coast, from Oregon to Alaska, the question is often asked, "What can be done for the salmon?" One remedy to the problem of diminishing runs, caused to a great extent by Japanese high seas fishing operations, has been the closing of the Bristol Bay. The new state of Alaska has gone further and abolished fish traps.

River blockage, pollution of streams, diversion of water for irrigation and reclamation have been factors in the reduction of the salmon supply. But, the greatest single cause has been the all-out method of catching. With no regard to the future, this system has left little opportunity for escapement of salmon to ascend streams and propagate. Had it not been for the bold stand taken by the Fish and Wildlife Service, through enforcement of stringent fishing laws, the salmon might be vanishing.

While it is imperative that something be done on an international level to save the salmon, it is important that we do not lose our friendship with the Japanese in the process. Japan not only has kept her North Pacific agreement, but has actually moved her fishing activities farther away from the abstention line and concentrated on fishing below the Aleutian Islands. Perhaps no one has come closer to the crux of the matter than Governor Egan of Alaska, who said, "I am convinced the Japanese, themselves, are cutting their noses to spite their faces in not agreeing to some conservation measures. This isn't just a matter of economic advantage to the Japanese for the moment. In a matter of a few years, they won't have any red salmon left either."

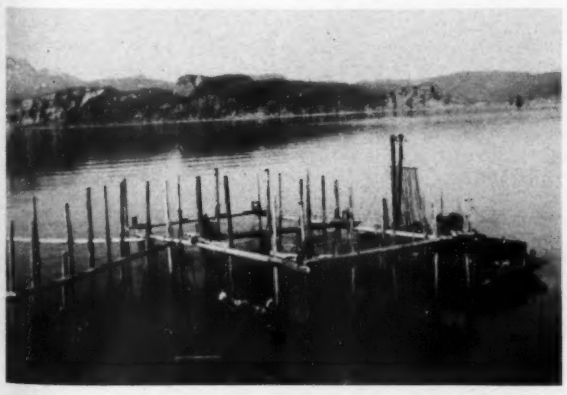
It would be wonderful to see a return of the great salmon runs, such as 1932, when the freighter *Glacier*, was able to bring back 131,826 cases of canned red salmon from one cannery. It is possible to bring back the runs of the past if all nations affected can be brought together through a meeting of the best fisheries scientists of each nation. Salmon conservation is definitely not a problem for politicians, for the high seas belong to all. A few Japanese scientists, who are fully aware of the Pacific salmon tragedy, could be employed to inform their people through newspapers about conservation that would ensure a harvest of salmon in future years.

Just as the United States, Canada, Japan, and Russia united to save the almost extinct fur seals and restore them practically to their former number, it is believed that all nations interested in Pacific salmon can come to an agreement that will ensure propagation, with fishing rights and a prosperous industry for all concerned.

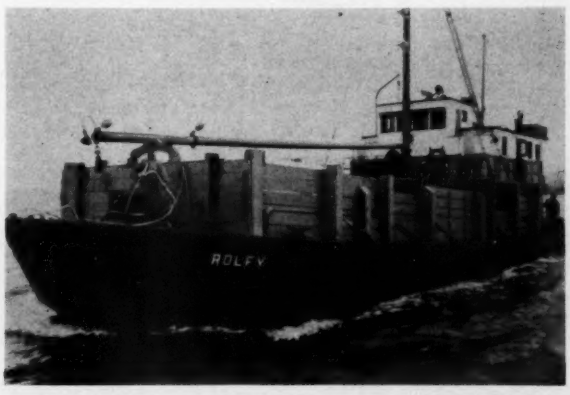
In the easy going days of the sailing ships, there were salmon aplenty and the supply seemed inexhaustable. The sailing vessels went north from San Francisco, Portland, and Seattle for the last time in the early twenties. Sailing ships were supplanted by steam freighters, and by 1944, unionized fishermen and cannery crews were being sent north by plane. There entered an era of keener competition, with many packers liquidating, as every operator sought the utmost in the harvest.

Those who catch and can salmon around Puget Sound

(*Continued on page 30*)



Tender and scow shown at a salmon trap. Traps are no longer legal in Alaska waters.



The 82' Ketchikan, Alaska tender, "Rolfy" of the Nakat Pack Corp. transporting salmon from fishing grounds to cannery.

Quality is Keynote of Fisheries Convention

Need for Better Resource Management Aired at National Fisheries Institute in New York City

THE pressing need for better resource management in the face of mounting competition for the basic resources of land and water was outlined by Ross Leffler, Assistant Secretary of the Interior, speaking at the 14th annual convention of the National Fisheries Institute, April 10-15, in New York City. But before there can be an improvement, he said, there must be a foundation of adequate knowledge. Only then can we build the practices of good use. The knowledge to do so can be secured only through research.

The fishing industry is on the threshold of a great future, accompanied by tremendous responsibilities, according to outgoing president L. Vernon Drape of Ell Vee Dee, Inc., New Bedford, Mass.

"With the world population expected to double every one hundred years, scientists and sociologists are looking to the oceans to provide the means of survival. We must meet the challenge of providing additional food for future populations by beginning right now to conserve our resources, develop quality standards, design boats and fishing gear which will take seafoods from depths hitherto unfished, and perfect radar and sonar devices to help locate schools of fish."

Drape told the representatives of commercial fisheries and allied industries at the Commodore Hotel, that substantial progress has been made in the marketing of fishery products with the U. S. consumer. The National Fisheries Institute has embarked upon a revolutionary standards program in cooperation with the Bureau of Commercial Fisheries. It will be similar to that proven so successful with agricultural products. "In an industry like ours, it is a never ending vigilance and an absolute essential that we maintain the best quality from the time the fish are removed from the water until they reach the table," he said.

Ralph E. Carr, president of Mid-Central Fish Co., Kansas City, Mo., and newly elected president of the N.F.I., said that his tenure in office will be "dedicated to support the great ambition of N.F.I. members to continue and expand quality control, with an interest in the future development and promotion of the fishing industry." Elected secretary at the convention was Robert Erkins, president of Snake River Trout Co., Buhl, Idaho. The new treasurer is Lewis Goldstein, Liberty Fish Co., Philadelphia, Pa.

Quality Should Accompany Sales, Quantity

Increased sales and consumption of fish and seafood products is one answer to the problems facing the American fishing industry today, according to Arnie J. Suomela, commissioner, Fish and Wildlife Service. Suomela, who called the N.F.I. convention the sounding board in attacking the industry's problems, said fishermen, vessel owners, processors and wholesalers, are bothered by rising production costs in day-to-day operations.

Cost of vessel replacement and construction, gear and fuel make it advisable for fishermen and fleet operators to find more effective and economic methods of catching and landing the fish, Suomela said. At the same time, he added, processors and wholesalers too must reduce costs of handling the industry's products.

Unlike other industries, there is no consumer problem, he told the meeting. The consumer needs only be convinced to buy more. With the per capita consumption of seafood at ten pounds, as opposed to 160 pounds of meat, Suomela pointed out that selling just one more pound per capita would be enormously rewarding to the entire industry.

New officers of the National Fisheries Institute, elected last month during the 14th annual convention in New York City. Left to right: Lewis Goldstein, Liberty Fish Co., Philadelphia, Pa., Treasurer; Robert Erkins, Snake River Trout Co., Buhl, Idaho, Secretary; and Ralph Carr, Mid-Central Fish Co., Kansas City, Mo., President.

A big step in that direction is the formation of Fish and Seafoods Promotions. A new division of the National Fisheries Institute, it was announced by J. Roy Duggan, chairman of N.F.I.'s publicity committee. Duggan, also vice president of Seapak Corp., St. Simon's Island, Ga., said, "The formation of this new promotions division will offer all segments of the fishing industry opportunities to expand promotional programs in the United States."

He emphasized that, with an already established industry promotion division, a program could be started immediately by any part of the industry. According to the by-laws of the new division, the objective will be to promote the distribution and use in the United States of edible fishery products by advertising, publicity, and other forms of information.

The need for increased quality standards in the fishing industry was stressed on Food Store Day by representatives from five of the nation's largest chain stores. Addressing the general session of the convention was a panel of speakers including Joseph H. Mueller, National Tea; Sidney Beck, Food Fair Stores; Lloyd M. Johnson, Super Valu; E. J. Voigt, Loblaw, Inc.; and Louis Voron, Grand Union Stores. The moderator was W. Jackson Catt, Buffalo, N. Y. fish distributor.

"Quality must be consistently tops," said Voigt, "but, before we talk quality, let's get quality standards throughout the industry." Johnson urged that more fishery products be brought under quality standards, although a "good deal in quality improvement has been brought about by new and improved methods of handling from fishing grounds to the processing plants. The quantities in which frozen and prepackaged fish and seafoods are purchased, and the nature of the processed product, make it practically impossible to conduct anything other than rather superficial spot checks on quality. We must rely on the character and established reputation of our suppliers."

Conservation Is the Concern of All

Producing seafoods in quantities large enough to meet the demand is a problem for the conservationists. The rise in consumption is indicated by the recent increase of shrimp production. John Mehos, president of the Shrimp

Association of the Americas which held its directors meeting concurrently with N.F.I., reported that production of shrimp increased in 1958 to a record 215,393,000 pounds. This figure, based on reports to the Fish and Wildlife Service, compares with 191,018,000 the year before. It represents an increase of nearly 13 percent.

Top conservation measures must be utilized to insure continuation of production at such a level. "Steps have already been taken in several Gulf states to conserve shrimp resources and insure ample supplies for the growing consumption," Mehos said. "This is being done by setting up State regulations, whereby the waters in areas where shrimp spawn are closed during certain seasons of the year, to protect the small shrimp.

"Texas currently is considering such proposals. Louisiana and Florida already have instituted them." Mehos believes this is one of the most forward steps the shrimp industry has taken, and that it should insure a stable U. S. market for years to come.

J. Nelson Benedict, outdoor editor of the Newark Star-Ledger, assuming the duties of moderator, introduced several panel speakers who discussed "Fisheries Conservation—The Responsibility of Every American." N. F. I. general manager, Charles Jackson, emphasized the need for education to convince sport and commercial fishermen that the resources, upon which both depend, can only be supported and managed properly if they work together toward this one end.

Governor Robert B. Meyner, of New Jersey talked at some length of the enormous problems of officials in states which have vast populations seeking recreation and a livelihood from relatively limited waters. He stated that public officials can lead in conservation programming, but their accomplishments will be very limited unless they have supporting public opinion.

State Senator Robert C. Crane of New Jersey discussed the lack of public understanding which is necessary in the promotion of good management. For instance, he pointed to the lowering of the water table by draining marshes to eliminate mosquitoes. Likewise, he stated that an acre of forest is equal to an acre of reservoirs in water value. Both forests and marshes are essential to fisheries. Although a legislator must tread a very narrow path in developing sound management to help all and hurt none, Crane believes that with sound management there should be plenty for all.

Ross Leffler, explained the responsibility of the Federal Government as coordinating the efforts of all groups—federal, state, and other agencies. "Although the ownership of a basic resource such as land may be in the hands

Left to right: Murray Wheeler, director of public relations for the National Fisheries Institute; Harry Claxton, Harry Claxton, Inc., Washington, D. C. and Ben Johnson, Seapak Corp., St. Simon's Island, Ga.

of just certain persons, control of water, fish, and wildlife rests in the State for all people. Government merely regulates the use. Regardless of who has title, there must be good management of basic resources for the general public benefit. In simple language, this means the Government has a responsibility to bring about good resource management.

"It is the basic duty in commercial fisheries management to assure the fullest use of these resources, consistent with sound conservation principles. Beyond this basic responsibility, there are other duties which must be discharged by the Federal Government.

"There is a Federal responsibility to conduct research. It must operate in commercial fisheries areas needing attention, where other agencies cannot do the job, or where they are unable to provide the continuity of research which is necessary to get the answer. The responsibility of assisting in any and every way possible to expedite the exchange of the information produced among agencies involved, both public and private, is another Federal concern. There is coordination of research in different agencies concerned with the resources of the sea.

Teamwork a Necessity

"An outstanding example of coordinated teamwork is the present comprehensive estuarine research program, which is fundamental to proper management.

The estuarine areas along our coastlines are essential

(Continued on page 36)

At National Fisheries Institute convention in New York City. Left to right: Charles Jackson, general manager; and L. Vernon Drape, out-going president. J. K. Rulon, New England Seafood Co., Washington, D. C. and Gregory Sacco, Blue Sea Fish Co., Boston, Mass., NFI vice-president for Region I, judging haddock fillets. Barnie Finn, O'Donnell-Usen Fisheries, Boston, and Stanley Remus, Stanley Remus & Co., Chicago Ill., examining fish sticks.

New 80' steel dragger "Cap'n Bill III", her owner, Capt. Henry Klimm, left, of Hyannis, Mass.; and her builder Luther H. Blount, Blount Marine Corp., Warren, R. I.

Steel Dragger "Cap'n Bill III" Treated Against Rust

EXCELLENT sea keeping characteristics are reported for the new steel dragger *Cap'n Bill III* by her owner, Capt. Henry Klimm of Hyannis, Mass. Landing at Woods Hole, Mass., the vessel brought in her maiden trip of 28,500 pounds on April 21, followed by 60,000-lb. catch on May 4.

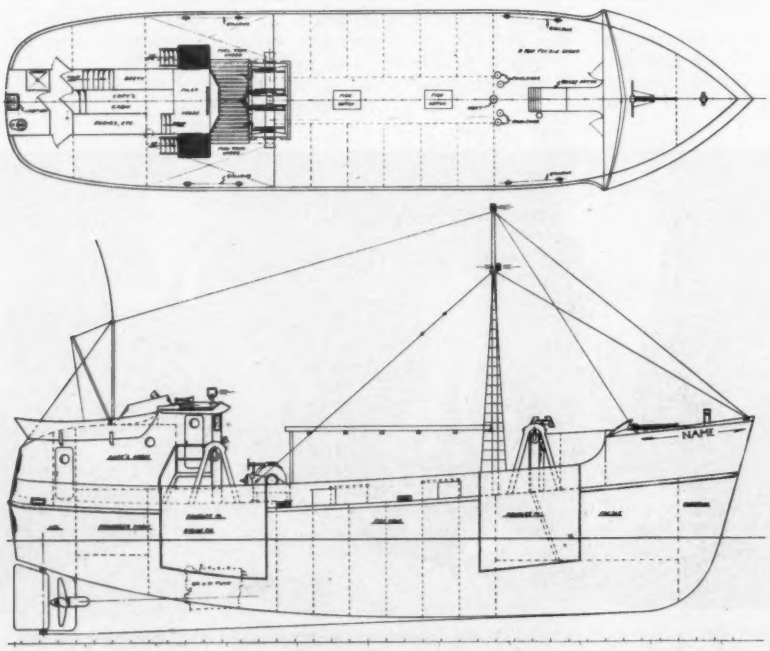
The first 80-foot class New Bedford-style dragger to be built of steel, the *Cap'n Bill III* was designed and constructed by Blount Marine Corporation of Warren, Rhode Island. Luther H. Blount is president of the firm, and Warren Sherburne, Jr., is naval architect.

The new vessel follows the lines of the Webb Institute trawler model, and is of molded design with 5/16" and ⅜" welded steel plating. In the way of the gallows frames 7/16" alloy steel plate is inserted to provide better corrosion resistance.

Several innovations have been incorporated in the dragger, including a specially contoured skeg and the use of a rust-preventing compound. The skeg is built as an appendage, similar to an airplane wing section, and adds efficiency in propulsion and handling.

The entire hull, inside and outside, has been treated with pure zinc—almost 1500 lbs. of the metal being used in wire form, sprayed on (metallized) or painted on with zinc pigment type paint. Over this zinc coating, a very thick coating of rubber asphalt composition was applied, which is expected to virtually eliminate any oxidization and condensation that occurs on untreated steel hulls.

The new dragger has a waterline length of 77' 6", molded depth of 12' and draft of 10' 3". She has a transom stern, and is transversely framed, with single bottom construction. Inverted angle framing is 2½ x 5 x 5/16 inches on 24" centers. Fuel tanks are built into the hull at either forward corner of the engine room, and have a total capacity of 5000 gallons. Fresh water capacity is 1000 gallons.



Deck arrangement plan and ou.board profile of 80' steel dragger "Cap'n Bill III", designed and built by Blount Marine Corp., Warren, R. I.

The *Cap'n Bill III* has fine hull lines, considerable dead rise and ample rake to the bow for easier driving. A good flare provides greater buoyancy and prevents excessive pitching. Concrete filling in the bilges, up to 30" deep, provides ballast and flooring for the 24' long fish hold, which has a total capacity of 126,000 lbs. or about 100,000 lbs, of iced fish. The hold is insulated with 5" thick Johns-Manville J-Foam between the steel bulkheads and inside hold sheathing. The sheathing comprises a double layer of ⅜" marine plywood, coated with Fiberglas on the fish stowage side.

The arrangement of the new dragger is of conventional style, with 8 bunks and the galley in the fo'c's'le, 2 bunks in the after cabin and the Captain's stateroom on deck. An athwartship passageway provides access between the stateroom and quarters below and connects the toilet, lavatory and shower facilities in the turtleback. The main deck has an asphalt-concrete covering.

The *Cap'n Bill III* is powered by a 6-71 Twin General Motors Diesel,

(*Continued on page 33*)

Air Curtain Concentrates Maine Herring

Takes large hauls of herring impossible to reach by conventional methods and pays for itself in hours

Following successful experiments by the U. S. Fish and Wildlife Service during the past two seasons, several Maine herring fishermen are planning to use the air bubble system of fishing this year. The seiner *EDK*, owned by Madsen & Miller of Portland, is being equipped with a Model 20, 196 cu. in. capacity Ingersoll-Rand compressor which will produce 138 cu. ft. of air per minute. It will be V-belted to a gasoline engine and connected to 500 ft. of ¾" hoses and 500 ft. of 1" hoses.

A curtain of air bubbles was first tried by the Bureau of Commercial Fisheries as a means of influencing the movements of Atlantic herring schools in Maine coastal waters during the fall of 1957. The initial trials, using an air curtain 500 feet in length, established that herring schools would avoid passing through such a curtain and that consequently, their movements could be influenced with it. Additional trials, made late in 1957, were successful in driving herring schools from the center of a cove, up into shallow water near the shore.

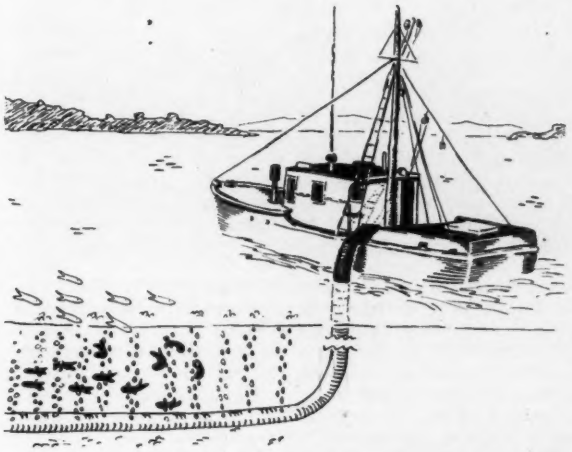
An extended air curtain 1200-feet in length was tried out during the fall of 1958 in the Diamond Island Roads area of Casco Bay.

Although it is conceded that these schools of herring were found in an area that was ideal for testing the air curtain, Diamond Island Roads is similar to many locations along the Coast of Maine where herring schools often remain just out of the reach of conventional gear. Rapid tidal flow, depth of water, boat traffic, and flow of debris, factors which often prohibit the use of seine gear, do not prohibit the use of an air curtain.

The equipment used for the 1958 work consisted principally of 12 foot length of polyethylene plastic flexible pipe, with holes drilled at 1-foot intervals and two air compressors supplying air, one at each end of the pipe. The pipe, was weighted with lead to make it sink, and was laid out and retrieved with a power-driven hose reel.

The compressors were Worthington models, 15C1 and the larger 20XC1 mounted on separate vessels, driven by a 26 hp. air-cooled gasoline engine and a 52 hp. Diesel engine respectively. The 15C1 compressor supplied air through a 30-gallon air receiver and hose reel connections to the plastic pipe. The 20XC1 compressor was coupled to the plastic pipe through a 25-foot length of steam hose, because the heat of the compressed air would melt the polyethylene pipe if it were connected directly to the compressor. The connection of the steam hose was kept overboard in the water at all times during operation to keep the plastic pipe cool. At the other end, sufficient heat was dissipated through the air receiver, piping, and hose reel to prevent melting of the pipe. (An ideal installation would include a water-cooled after-cooler or water-cooled receiver tank to remove the heat of compression from the air).

Holes of two sizes were drilled in the plastic pipe. A 200-foot section nearest the smaller compressor was bored at 1-foot intervals with a .0222-inch diameter drill. The remaining 1000-foot length was bored with a .0312-inch diameter drill. Two sizes of plastic pipe were used, 1-inch and ¾-inch. A five hundred foot length of 1-inch pipe was connected to the larger compressor, two hundred feet of 1-inch pipe to the smaller compressor, and a five hundred foot length of ¾-inch pipe was connected between the two sections of 1-inch pipe. All sections of pipe were weighted with a wrapping of 3/16-inch lead wire to make them barely buoyant in sea water. The lead wrappings were covered with plastic insulation tape. Additional two and ½-pound leads were attached by 18-inch beckets at 20-foot intervals to the pipe as it was payed out so that the pipe floated 18-inches from the bottom. This method of weighting was used to avoid catching on small obstructions when sweeping the pipe across the bottom. Spongex seine floats were attached to the pipe with ten fathom lines at 100-foot intervals. The lines were used to lift the pipe over larger obstructions and to tow the pipe across the bottom.



Air is forced through minute holes in a hose forming a curtain of air bubbles. The herring will not pass through the curtain and may be driven by moving the hose, into waiting nets.

The 1958 Operations and Results

Fish schools for trials of the gear were located by visual observation from a Piper Cub airplane. Air-driving operations were started early in September in the Diamond Island Roads area of Casco Bay after herring schools had been found there. The schools had been watched for a period of approximately two weeks before air-driving trials were started. During this time they were found to move, at dusk, down the channel between Great Diamond Island and Peakes Island, remaining well away from stop seining sites on either side of the channel. Fishermen reported that no fish had been caught here for three weeks.

One set of air gear was made to test the reaction of the herring schools moving down the channel. From the airplane, several small herring schools were observed to move down the channel as usual until they came up to the air curtain. Rather than pass through the air, the schools moved along it and passed by the end. No seine was attached during this first trial.

During subsequent evenings, trials were made in conjunction with seine sets. The air curtain was set up running diagonally out into the channel with the shoreward end attached to a set of seine gear. Schools coming down the channel were then guided shoreward and into the stop seines. When all the fish available appeared to be inside the seine enclosure, or between the air curtain and the shore, the offshore end of the pipe was swept ashore enclosing the fish. The air curtain was then pulled slowly ashore, driving the remainder of the herring into the seines.

Seine and air curtain sets made in this location during six nights yielded a total of 5350 bushels of herring. An additional catch, estimated to be 1000 bushels, was lost

(*Continued on page 32*)

PACIFIC COAST

Appeals Court Stays Order Banning Alaskan Fish Traps

The United States Circuit Court of Appeals on April 14 stayed an order by Secretary of the Interior, Fred A. Seaton, banning fish traps in Alaskan waters. The court directed that Seaton take no action prohibiting the use of traps in salmon fishing until it has ruled on an appeal in the case. The court said the appeal by the industry appeared to involve a substantial question of law. It added the industry might suffer injury if an injunction were not granted pending the outcome of the appeal.

The Washington State packers of canned salmon late in March were seeking to enjoin the U. S. Department of the Interior from banning or eliminating the use of salmon traps in Alaska. A suit was filed by the Washington attorneys of the canners. The complaint was that the Government order banning the traps is unlawful. A loss in revenue will be caused by the ban, the canners report. In 1958, the salmon business is estimated to have yielded a gross revenue of $65 million. The anticipated loss, was estimated to be the amount that was derived from the use of traps as opposed to purse-seiners.

Federal District Court Judge, John J. Sirica, last month denied an injunction sought by the industry against Seaton's order banning fish traps. He also rejected a plea by attorneys for Alaska fish-trap interests for an injunction pending an appeal.

In its order, the Circuit Court barred Seaton from enforcing his order banning the use of fish traps except to the extent that such use would be limited and regulated by the Alaska commercial-fisheries regulations as they were enforced prior to March 7.

Alaska's new Constitution, however, outlaws traps. The salmon industry contends that Secretary of the Interior Seaton has no authority to ban traps. Seaton says he is bound to follow the wishes of Alaskans, as expressed in their Constitution.

Washington Group Re-elects Hammer

Reidar Hammer of Seattle, Washington has been re-elected president of the Fisherman's Cooperative Association for the third consecutive term in that office, and his ninth year as a Director of the Association.

Kris Kyvik of Aberdeen, Wash., was named vice-president and Bert Johnston secretary-treasurer. Tom Leal of Port Angeles, Wash. and Oscar Hall of Seattle, Wash. are the new members of the Board of Directors. Henry Parpart of Seattle, Harold Graham of Port Angeles, and Dan Hjort of Kirkland make up the rest of the board members serving in 1959.

Indians Agree to Salmon Conservation

The state of Washington has reached a tentative agreement with seven Indian tribes over the conservation of salmon runs in reservation areas. The Indians said they would cooperate to assure fish escapement and asked that the activities of sports and commercial fishermen which affect the same runs also be curtailed.

Blood Tests Distinguish Salmon Stocks

The development of serological techniques or blood tests is one of the most promising methods of attacking the problem of identifying high-seas salmon stocks as to Asiatic or North American origin. The Seattle, Wash. Bureau of Commercial Fisheries Biological Laboratory has done a great deal of this serological work and reports that the research progresses slowly due to a lack of adequate serum stocks, which are being made from rabbit blood.

Laboratory personnel are exploring the feasibility of obtaining horse and goat sera so that the research can progress more rapidly. Because sera from animals such as rabbits, horses and goats do not give the desired refinement, the Seattle staff is investigating the use of the iso-immunization technique whereby sera are developed from captive salmon. This technique will enable the researchers to develop methods for much finer discrimination between salmon races than heretofore.

Washington Oyster Growers Request Import Legislation

The Pacific Coast Oyster Growers Association, Seattle, Wash., in a statement presented by Edward J. Gruble, president, recommended for consideration the following legislation: An equitable quota system on imports of Japanese products. Passage of House Bill 1244. This would establish a procedure for permitting shellfish to be admitted into the United States provided said shellfish are grown in pollution free waters and packed under sanitary conditions.

They would also have restrictions on the admissibility into interstate commerce, in the United States, of oysters canned in Japan under the label term "Pacific Oysters". The term "Pacific Oysters", through common trade and public usage of more than 30 years, has come to mean oysters of a species grown in the waters of the Pacific States and British Columbia.

The Association suggested that the words "Packed in Japan" or "Product of Japan" to be placed on the label in an unmistakable manner and of sufficient size to be clearly legible. The statement was presented to the Senate Interstate and Foreign Commerce Committee's subcommittee meeting on Merchant Marine and Fisheries Legislation. The meeting was held at Seattle, Wash. in April.

New Washington Laboratory Proposed

A bill to provide for the construction of a saltwater research laboratory in the Golden Gardens area was introduced recently by Congressman Thomas M. Pelly, Preliminary estimates provided by Ross Leffler, assistant secretary of the interior, indicated a laboratory would cost about $650,000. The lab would be operated by the Fish & Wildlife Service, Washington Dept. of Fisheries and the College of Fisheries and School of Oceanography of the University of Washington.

Rockfish, Sole Catches Increase

Otter trawl fish landings at Seattle during April showed increases in several varieties over the same month of last year. The rockfish catch, with 438,000 lbs. showed a 50 percent jump; ling cod went from 76,000 to 120,000; production of all sole species totalled 317,000 lbs. compared to 276,000 last April, with Dover sole and petrale sole each accounting for 120,000 this year. The only significant drop was for true cod, which slightly lowered the overall trawl landings.

Judge Salmon Pack In Seattle

Seven hundred cans of salmon were opened in Seattle, Wash. recently, so that teams totaling 150 persons could judge the $95,000,000 salmon pack for workmanship, color and flavor. The judging took place on the opening day of the 21st annual Salmon Cutting and Research Conference, sponsored by the Northwest Branch of the National Canners' Assoc.

Alaska May Challenge Statehood Act

Alaska may challenge the constitutionality of provisions of the Statehood Act, which retained federal control of the state's fish and game resources, Gov. William A. Egan said recently. Egan explained the state was "exploring the likelihood of challenging the constitu-

tionality of the Westland amendment, which is a part of the act enabling Alaska's admittance to the union."

The amendment, sponsored by Rep. Jack Westland of Washington, retained management of Alaska's fish and game resources with the Department of the Interior until at least next year. Egan's statement was made as a legal battle continued in Washington, D. C. to determine whether an Interior Department ban against the operation of fish traps in Alaska would be effective this season.

Seaton Closes Bristol Bay to Commercial Salmon Fishing

Regulations formally closing the Bristol Bay, Alaska, commercial red salmon fishery were signed recently by Secretary of the Interior, Fred A. Seaton. Four great river systems of Alaska, each having a traditional major salmon run, flow into Bristol Bay. From there, the salmon migrate to the high seas of the North Pacific.

Because of expected small salmon runs in the bay this year, which might not withstand the limited domestic fishery on the scale of 1958, plus the anticipated Japanese operations west of the Abstention Line, Seaton announced the action.

The Department of State and Department of the Interior have worked closely together in conferring with representatives of the Japanese government in an attempt to work out a solution to the high seas problem. However, these discussions have not resulted in an arrangement which would permit U. S. fishermen to carry on commercial fishing operations in Bristol Bay.

The regulations permit a subsistence-type fishery that will partially alleviate any hardship to the resident population of Bristol Bay, where salmon fishing is virtually the sole means of livelihood.

The length of the weekly fishing period will be governed by the amount of fishing gear registered for use, in the Nushagak District. In the Bristol Bay area generally, commercial fishing for species other than red salmon and personal use salmon fishing by means of set nets is permitted.

Frogmen Studying Crabs in Alaska

Two Seattle frogmen have left for the Aleutian Islands to spy on juvenile king crabs. One thing the investigators are interested in is why young crabs stack themselves in piles of 150 to 200. The frogmen's work will be done for the International North Pacific Fisheries Commission, set up by Japan, Canada and the United States.

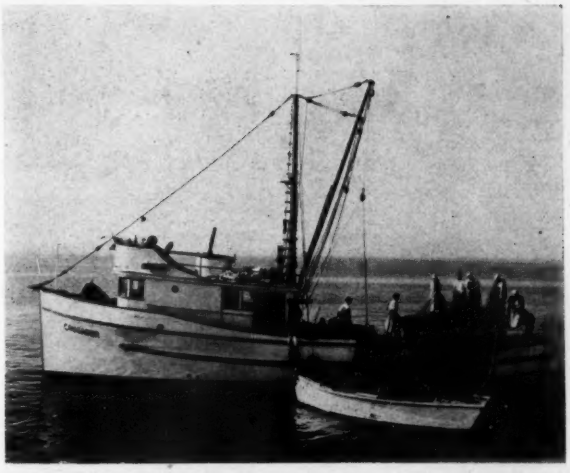
The men hope to gain information about the juvenile crabs' growth, what age they are at a certain size and how many times they moult. Frogmen are also investigating the nearly extinct sea otter in a sea-otter feeding range in Kuluk Bay, Aleutian Islands, to estimate its capacity to feed sea otters.

Alaska License Bill to Cover Trap Loss

A bill establishing a new licensing schedule for commercial fishing, introduced in the Alaska House of Representatives, would place a heavier revenue burden on non-resident fishermen. Of the proposed $563,530 estimated total revenue the schedule would produce for the state, $315,420 would come from non-resident gear. This compares with $529,220 during the last fiscal year. Observers said the increased license-fee schedule would help cover a revenue loss of $333,900 from outlawed fish traps.

Oregon Tests for Proper Net Seasons

A test fishing program, launched on the Columbia river by the Oregon Fish Commission, was scheduled through March, until the opening of the spring chinook fishing season. Further test fishing is planned during the same period next year. The program is designed to assist fisheries management agencies set commercial net seasons that will insure proper harvest of migrant salmon stock. Both Oregon and Washington fishery departments are carrying out the test fishing project.



"CRUSADER" 57' fishing boat of Anthony Zuanich, Bellingham, Wash. is powered with a 150 hp. Murphy engine turning a 48 x 39 Coolidge propeller through 3:1 Twin Disc reduction gear. She uses RPM Delo lube oil and has a Danforth anchor, Gold Medal nets and Raytheon Fathometer.

John Tarabochia, Astoria gillnetter, was awarded the Oregon test fishing contract, with fishing carried out in the Woody Island area, 25 miles upriver from the mouth of the Columbia.

Fish taken during the program are transported to the Astoria experimental laboratories for further study and eventual sale. The project is expected to indicate time of fish runs, abundance of fish, and age and size composition of the runs. George Hirschhorn, project leader for Columbia River Investigations, is supervising the program.

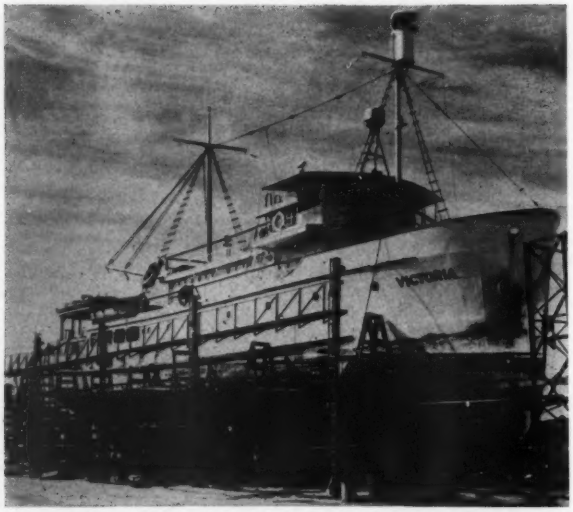
Oregon, Washington Join in Study of Chinook Salmon

Latest experimental methods, including anesthetics for captured fish administered to facilitate removal of hooks and marking, are being used in an unusual program aimed at discovering the secrets of the chinook salmon's life habits. Oregon and Washington departments have joined forces in the tagging program. They will mark fish that appear in ocean waters between the mouth of the Columbia river and Gray's Harbor.

Evaluation of the collective information, according to Jergen Westrheim, Oregon Fish Commission research director, should provide new facts about the ocean fishery during this season of the year. The most important find would be to learn where the chinook goes and what happens after his appearance in those waters.

Westrheim explained that the information will be invaluable to fishery agencies. It would be of particular assistance to those persons planning management of the stock. Because of the mysterious movement habits of the fish, it has been difficult in the past to determine a proper balance.

In addition to evaluating the seasonal period, they hope to learn something about the numbers present in the area, their age, size, and racial composition. Fishing intensity through one or more seasons, contribution of Columba river stocks to the fishery, timing of the spring run off the Columbia, and hooking mortality of small salmon will also be studied.



Hauled out for checking her hull coating, applied 11 years ago, is the 128' tuna clipper "Victoria" operated by the Ambrose Co., San Diego, Calif. The hull has a straight four coat No. 33 Amercoat vinyl system, which is being renewed below the water line, after sandblasting.

Predict Good Oregon Salmon Trolling

Oregon Fish Commission biologists, shortly before the opening of the 1959 salmon trolling season, predicted better fishing than in 1958. The prediction was based on results of a test fishing and tagging program, carried out in the Columbia River area. The tests were conducted by Bob Ellis, Fish Commission biologists and Bob Rohland aboard the charter boat *Cluney*, skippered by Larry Cooper, Newport.

A day before the trolling season opened, commission representatives estimated that 500 regular commercial salmon trollers were anchored in the area awaiting the opening. A good season might bring out nearly 1000 boats with the addition of part time commercial craft.

College to Study Seafood Preservation

A new grant of $14,000 has been made to Oregon State College to study irradiation-preservation of seafoods for the Armed Forces. The research, sponsored by the Quartermaster Food and Container Institute, could extend the market for fresh Oregon crab meat and provide fresh-tasting fish products for Army menus in distant areas.

Fifty Million Salmon for Oregon Waters

The Oregon Fish Commission has announced that over 3,500,000 Chinook salmon fry were recently transported from a U. S. Fish & Wildlife Service hatchery, located in the State of Washington, to central Oregon and released into the John Day and Warm Springs rivers. The tiny chinook, averaging about 1,000 to the pound, will add supplemental stock to the John Day River and to the Deschutes of which the Warm Springs is a tributary.

The project is part of a cooperative program using facilities of the Oregon Fish Commission and the U. S. Fish & Wildlife Service. The fish are 1958 brood and, according to fishery technicians, should return to the rivers in the fall of 1962. At the present time, these two rivers have relatively small runs of fall Chinook salmon, and it is hoped that the new stock will help increase abundance of this species.

Over 10 million hatchery reared fall Chinook have been released by the Oregon Fish Commission in the past few months, and another 22 million will be planted in the immediate future, according to the Director of Fish Culture for the Commission. "Liberations of all salmon eventually will bring a total of over 50 million new fish for Oregon waters before the end of this year's program", the Director said.

Salmon Change Color in California

Reports from San Francisco say salmon are changing their color from red to pinkish, to almost white. "The fish have been running 20 to 25 percent pale and the color of lots of them is almost like halibut", said Frank Alioto, president and owner of Standard Fisheries Corp. The fish is the same Chinook salmon, but what is causing it to change color we do not know".

He said the price agreed upon for red salmon, at the start of the fishing season April 15, was 50 cents a pound for large red fish, and 40 cents for mediums and smalls. But because of the color change, Alioto said, the buyers dropped the price for pale salmon to 22 cents a pound for large and 18 cents for small. Fishermen promptly rejected the cut and tied up their boats.

A spokesman for the California Fish & Game Department suggested the color change might be due to the salmon eating more white-fleshed food.

To Reopen San Pedro Plant

Van Camp Sea Food Co. has announced that its San Pedro, Calif. NK plant will be reopened about the first of June, simultaneously with the closing of its San Diego tuna cannery. W. J. Gillis, vice-president of production, said the move is being carried out so that Van Camp can consolidate its canning operations at Terminal Island.

The NK plant, which has been closed since January 1956, will add about 250 employees to the local payroll when it is reopened. Concentration will be placed on tuna production. Van Camp also operates the CP tuna plant, and the AT sardine and mackerel plants on Terminal Island.

California to Kill Sea Lions

The California State Senate Fish and Game Committee has approved a resolution authorizing the reduction of California's estimated 19,000 sea lion population down to 5,000. The salmon industry has been urging the sea lion massacre, claiming they prey on salmon as they return to the spawning streams. Industry spokesmen unsuccessfully argued for unlimited shooting of sea lions. They suggested the reduction of the herds be by depth bomb.

California Boats to Africa

Bob Beamon, president of the Van Camp Sea Food Co., San Diego, said recently that his company has sent two of its big tuna clippers on a fishing voyage to the West Coast of Africa. The boats are the 148-foot *Chicken of the Sea*, skippered by Capt. Joe Nunez, and the *White Star*, skippered by John Tasso.

The *Chicken of the Sea* made a pioneering voyage to the African coast early this year, returning to Puerto Rico with 450 tons of tuna caught in a few days time. This trip lasted 110 days, but the fish was caught within two weeks. Much of the time was spent in calling at various West African ports to inquire about fishing regulations and port facilities and to meet government officials.

Sees Need of More Ocean Research

Milner B. Schaefer of the Scripps Institute of Oceanography, LaJolla, Calif., recently stated that this country knows less about the ocean than it does about the surface of the moon. He contends that the United States must double its deep-sea research in the next ten years or face serious economic, political and military hazards.

Schaefer also said there is the possibility of a new fishing industry in the Gulf of Alaska. There are large stocks of pollock in the gulf which could be caught easily.

GREAT LAKES

Patrol Boat Skipper Serves Michigan for 31 Years

Capt. Charles J. Allers, head of the Michigan conservation department's commercial fishing law enforcement fleet since 1928 and a Great Lakes seaman for more than half a century, retired on May 2. Patrol Boat No. 1, flagship of the fleet, was scheduled to be retired at the same time. Chances were, however, that the vessel would be kept in service a while longer because of the lack of funds to buy a replacement boat.

Capt. Allers, a resident of Traverse City, Mich. is 65 this month. He joined the department April 1, 1928. Given the task of reorganizing the commercial fishery patrol fleet, Allers has been in charge of it since then. Patrol Boat No. 1, now 31 years old, was new when Capt. Allers took her over. He has been the vessel's one and only master.

In the years since they joined the department, Capt. Allers and Patrol Boat No. 1 have been familiar figures on the Great Lakes, checking commercial fishermen and their gear from Isle Royale in Lake Superior, the lengths of Lakes Michigan and Huron, down to the state's waters of western Lake Erie.

The veteran skipper was an old hand on the lakes before joining the conservation department, having sailed the waters as a commercial fisherman, seaman, deck officer, and ship's master for some 20 previous years. He also served in the U. S. Lighthouse Service, the U. S. Coast Guard, and is a licensed master and first class pilot on the Great Lakes and tributary waters.

Capt. Allers' father and grandfather were seamen before him and he recalls, as a nine-year-old boy on Beaver Island in Lake Michigan, watching the operations of the commercial fishing fleet and the passing lake cargo vessels. He estimates that he and Patrol Boat No. 1 have sailed more than half a million miles on the Great Lakes since 1928—a distance equal to 20 times around the world. Patrol Boat No. 1 has planted more fish—lake trout, lake whitefish and walleyes—than any other boat on the lakes. In earlier days it was used extensively for this purpose, but the practice has been largely discontinued.

The Michigan commercial fisheries patrol fleet today has three smaller boats in addition to No. 1, and department thinking, in planning the retirement of the larger vessel which carries a crew of four, was that the smaller craft are more maneuverable and easier to maintain.

Patrol Boat 1 of the Michigan Department of Conservation's law enforcement fleet, which Capt. Allers has captained since 1928.

Capt. Charles J. Allers, Traverse City, Mich. who has retired as supervisor of commercial fishing of the Michigan Department of Conservation.

Two Records Are Set As Michigan Fishing Improves

Michigan commercial fishermen had a better season last year than they did in 1957. A preliminary report from the fish division of the Michigan conservation department placed the 1958 catch at 23,991,684 pounds, valued at $2,824,560. The previous year's take was 22,477,684 pounds and $2,536,160.

The bulk of Michigan's 1958 commercial catch came from Lake Michigan—11,776,230 pounds. Lake Superior was second with 5,516,850 pounds; Lake Huron third with 4,951,644 pounds, and Lake Erie fourth with 1,756,956 pounds.

Two new records were set. Chubs, single most important fish in terms of value, and smelt—were taken in greater numbers than ever before. The smelt record was 6,213,543 pounds, compared to the previous high of 6,185,850 pounds in 1956. The value of last years catch was $186,541. The 1957 smelt catch of 5,485,932 pounds brought $154,244. The most valuable catch was chub, which totaled 5,099,280 pounds and brought operators $1,038,100 compared with the 1957 catch of 4,285,160 pounds, worth $885,550.

A comparison with the 1950 Michigan commercial fisheries report shows that chub has become increasingly important, especially in Lakes Michigan and Huron since the lake trout and the lake whitefish were reduced by the sea lamprey.

The No. 2 fish last year was lake trout, of which 790,780 pounds valued at $358,590 were taken, compared to the 1957 catch of 848,780 pounds worth $393,830. All of the 1958 lake trout catch came from Lake Superior.

No. 3 last year was herring, the total catch of 4,409,636 pounds bringing $315,013. Lake Superior produced most of the herring—3,891,220 pounds, while 470,720 pounds came from Lake Michigan and 47,700 pounds from Lake Huron. Yellow pike ranked fourth with 648,450 pounds bringing $251,950, compared to a 1957 catch of 672,140 pounds, worth $199,000. No. 5 was the yellow perch catch which was 1,148,760 pounds worth $212,750. In 1957 the catch was 1,147,760 pounds, which brought $140,450.

Emergency Action Taken to Recover Nets

The Wisconsin Conservation Department early this spring put men and equipment on Green Bay to help recover commercial fishing gear stranded in the Bay because surface conditions made the usual transport over the ice impossible. Such action by the department was authorized in an emergency resolution passed by the State Legislature, after it became apparent that conditions on Green Bay threatened the loss of many thousands of dollars worth of equipment. On one operation alone, the department retrieved 42 nets averaging 250 feet in length, which had been set seven to 12 miles from shore. Two airboats and a number of wardens were used in the operation.

Maine Canners Get Report On Sardine's Food Value

An M.I.T. nutrition authority recently told Maine sardine canners their product contains both essential protein and fats, balanced so that they favor good muscle building and reduce a tendency towards fat production. Making the comment was Dr. Bernard E. Proctor, head of the Department of Food Technology at the Massachusetts Institute of Technology during the Maine Canners Annual Research Meeting at Bangor in April. The statement was part of Proctor's summary on extensive animal feeding experiments, which the Institute has been conducting for the industry for the past 18 months.

He further hailed the product as "a good source of high quality protein, showing a good pattern of amino acids the building blocks for protein of the type found in milk, eggs, and meat."

Proctor also told the canners they had an excellent all-around food, including enough iron in a single can to take care of the human body's needs for a whole day, as well as plenty of calcium for growing children, and a high level of proteins.

He complimented the industry on its mandatory quality control and research program "which means better and more acceptable Maine sardines to produce better nutrition for more people."

Other speakers at the annual meeting included Commissioner E. L. Newdick of the State Department of Agriculture who described the quality control program as a pace setter for the fishing industry. Otis Anthony of Brewer and chief sardine inspector Andrew Watson of Augusta gave reports on certain aspects of operating the quality control work and assistant research director Ralph Berglund of Brewer reported on the research phases.

New Maine Boats and Installations

Rockland Boat Shop, Rockland, is building a 32' x 9' 8" x 3' 2" lobster boat for Capt. Donald Cundy of Monhegan, Me., to be delivered in the Fall.

Hunter Machine Co., Rockland, has installed an 85 hp., straight drive Chrysler Ace in the 28' lobster boat owned by Capt. Woodbury Snow of Matinnic, Me.

Several Maine lobster boats have been repowered with Flagship marine engines, distributed by Harbor Supply Oil Co., Portland. Model 150 engines, rated 150 hp. at 3600 rpm. with 2:1 Paragon hydraulic reduction gears, have gone into Capt. Bernard Curtis' 30' boat at Owl's Head, Capt. Robert Spear's 32-footer at Peaks Island, Capt. Wm. Gansky's 32' lobsterman at Cundys Harbor, and Capt. Maurice Merrill's new 34 foot craft at Bailey Island.

Capt. James Brackett of New Harbor has installed a 220 hp., 4800 rpm. Flagship with 2:1 Paragon gear in his 28' lobster boat, while Capt. George Johnson of Bailey Island has installed the same engine with straight drive in his new 34' lobsterman.

Harbor Supply has appointed several dealers for the Flagship line. They include Bass Harbor Boat Co., Bernard; Stonington Lobster Cooperative, Stonington; Lask Bros. Boat Yard, Friendship; Hunter Machine Co., Rockland; Blake's Marine, Boothbay Harbor; Hanna's Garage, New Harbor; Skilling's Bros., Bailey Island.

Submitting New Maine Boat Tax

A new boat tax system, worked out by Maine assessors, boat builders, and repairmen, is scheduled to be submitted to the Legislature. The new proposal would tax commercial boats at 1½ cents per foot times the length. A thirty-foot boat would be taxed at 45 cents a foot.

In addition, the owner would pay a levy of 20 cents for each horsepower. The resulting total would be reduced 10 percent for each year of the boat's age to a minimum of 20 percent of the first year's total. The measure is tied in part to a boat registration bill still in committee.

The bill calls for statewide registration, with a $1.25 fee and numerous rules and regulations aimed at boat safety. Maine lobstermen's Association president, Leslie Dyer said his group was opposed to any measure covering commercial fishing boats which are already under Coast Guard jurisdiction.

High Award Presented to Director of Maine Sardine Council Research

The Maine Sardine Council's Research Director, Dr. Berton S. Clark, has been selected as the 1959 Nicholas Appert Awardee by the National Institute of Food Technologists. The award is given each year to a scientist who has made an outstanding contribution in the field of food technology.

Clark will receive the award at the annual meeting of the Institute to be held at Philadelphia. He will deliver a paper on the quality control and technological research program which he has developed for the Maine sardine industry.

In naming Clark for the high scientific honor, H. S. Spencer of the IFC Awards Committee stated that "he is well known in the canning, can making and allied trades for the scientific contribution he has made to their basic problems and that he had distinguished himself in industry, professional, military and government affairs."

Rockland Plant to Use Herring

A new industry in Rockland, Me. will make use of now idle waterfront at the Northend. Donald G. Wilson is the principal owner and manager of the new firm, Seapro, Inc. The firm will manufacture pearl essence from herring scales. It will use the whole fish in two or three allied processes which will produce other products which Mr. Wilson did not immediately identify. Eight or nine persons will be employed as operation begins. When the plant is in full production, it will employ approximately 15 local people.

Two other pearl essence plants operate in Maine, both being in the Eastport area with one having a purchasing depot in Rockland. Unlike Seapro, Inc., they use only the herring scales, and not the whole fish as Wilson plans.

Generators For Radar on Maine Boats

A new development in the installation of radar equipment on Maine boats is the use of a separate generating unit to provide an independent source of power. The Harris Co. of Portland has sold several Lavoie Bat Radar units for sardine carriers, operating with current from 1500 watt, 110 volt A.C. Kohler generator sets.

The plants have remote pilot house control, and provide constant power which assures a clearer picture. The generators also can be used to charge batteries and provide stand-by current.

The new equipment has been installed by Hunter Machine Co. on the Rockland carriers *Pauline* and *Double Eagle* owned by No. Lubec Mfg. & Canning Co. The *Frances Evelyn*, owned by Capt. Leon Smith of West Jonesport, and Seaboard Packing Company's *Ernest Lowell* have the same equipment, with the latter boat having a Surrette shore convertor.

New 71-Ft. Dragger "Sea Gold" Fishing from New Bedford

The latest Gamage-built dragger in the New Bedford, Mass. fishing fleet is the 71-foot *Sea Gold*, which landed her maiden trip on April 20. Owned by Capt. Magne Aadland, skipper, and Ingolv Aadland, engineer, she is operated under the name of Aadland Fishing Corp.

Of Condon design, the new vessel is the 14th built from the same model by Harvey F. Gamage, Shipbuilder, South Bristol, Maine, and is a duplicate of New Bedford's *North Sea*. She replaces the owner's *Antonina*, and is powered by a 225 hp. WAKD Waukesha Diesel with 3:1 reduction gear, driving a 48 x 32 Columbian propeller on a 3½" Tobin Bronze shaft.

The *Sea Gold* has a beam of 17' and draft of 9'. Her tonnage is 67 gross and 46 net, and hold capacity is 65,000 to 70,000 lbs. of iced fish. Framing is 3" double oak, decking is 2½" pine and fastenings are galvanized.

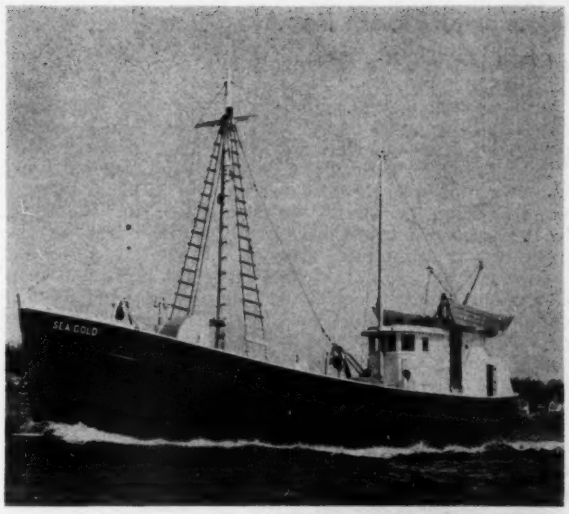
There is 3" Fiberglas insulation in the fish hold bulkheads, the engine trunk is of steel, and the deckhouse is sheathed with Exterior Fir Plywood. Four welded steel fuel tanks carry a total of 2400 gallons.

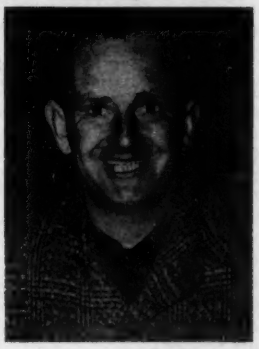
There are quarters for 8 men in the fo'c's'le and 2 in the after cabin, with a stateroom for Captain aft of the wheelhouse. A #10340 Shipmate oil burning range is furnished for the galley, and a No. 30 Shipmate hot water boiler supplies heat for the after quarters.

The new dragger is equipped with Model 1353 Hathaway winch, and one cylinder, 3 kw. Petter Diesel auxiliary unit with air compressor. There is a 5 kw. generator running off the main engine, batteries are 32-volt, Type 8HHG25 Surrette, and the electrical system has a "Safety" carbon pile voltage regulator. A Marine Products bilge pump and Jabsco wash down pump are driven from the main engine.

Electronic gear consists of Raytheon 75-watt telephone, Raytheon Fathometer depth recorder, two loran units and Kaar radio receiver.

Gamage is completing an 80' scalloper for Capt. Nils Risdal of New Bedford, and she will be powered with a D375, 300 hp. Caterpillar Diesel. The yard has started planking on another 87' dragger from designs of Dwight S. Simpson, Boston naval architect.





The new 71' dragger "Sea Gold" owned by Capt. Magne Aadland (shown at right) and Ingolv Aadland of New Bedford, Mass. She was built by Harvey F. Gamage of South Bristol, Me.

Boats Building at Friendship

A 45' dragger is being built by Lask Bros. Boat Yard, Friendship, Me., for Milligan & Hansen of Lake Grove, N. Y. She will have a 165 hp. Graymarine engine with Twin Disc 3:1 reduction gear.

Late this month Lask will launch a 32' lobster boat for Capt. Wayne Havener of Friendship, powered by a 150 hp. Flagship engine with 1.5:1 Paragon hydraulic reduction gear. A 30' lobster boat, with the same engine, is under construction for Capt. Alfred Wotton of Friendship.

Maine Sardines on Military Master Menu

Maine sardines will be included as an optional item on the U. S. Military Master Menu, effective January 1, 1960. Assurance of this action was given the Maine Sardine Council by Chief of the Army Subsistence Center in Chicago. Col. R. L. Ely advised the Council's executive secretary, Richard E. Reed, that final approval has been given after testing and consideration of the product by the Military Master Menu Board.

The action means sardines will be listed as a menu item for certain meals at all Air Force and Army installations. Under Federal laws, the military must purchase domestically manufactured items when available. This, coupled with the menu listing, should add considerably to the procurement volume for Maine sardines, Reed said.

Reed also commented that the Council has been working on the project for several years and that the Maine sardine industry's progress in quality control, package development, and other factors contributed much to the decision. Maine sardines have been on the U. S. European Theatre Master Menu for four years.

New York, Connecticut Starfish Funds

Both New York and Connecticut have appropriated $25,000 to carry on research for starfish control work. Action was just taken in both Legislatures and plans are being made to coordinate their work with that of the U. S. Fisheries Laboratory at Milford, Conn.

These positive steps should clear the way for endorsement of the starfish control legislation now pending before Congress. Last year the legislation failed to win the support of the Executive branch of the Government on the grounds that no efforts were being made by the states to solve the problem locally. It is hoped that this position will be modified now that the states have embarked on their own program.

Ends Shellfishing in Delaware Bay

New Jersey State Conservation Commissioner, Salvatore A. Bontempo, ordered an end to the taking of shellfish in the Delaware Bay area, except for certain specified ground, effective May 1 until further notice.

He said the ban was to protect the shellfish industry and let depleted beds build up again. It applies to oysters, clams and crabs in the tidal waters of the Delaware Bay, and their tributaries, except on grounds leased by the shell fisheries division of the State Department of Conservation and Economic Development.

Gloucester Pier to Get Aid of Public Works Official

The Massachusetts Commissioner of Public Works has entered the picture in an effort to solve the economic problems of the Gloucester Community Pier Association Inc. Anthony N. DiNatale of Milton said he would meet with Rodolphe G. Bessett, director of the DPW Waterways Division, owners of the State Fish Pier, regarding local control. A conference of State officials with the five directors of the pier corporation is expected to follow.

DiNatale said he knew about the State Fish Pier in Gloucester, but had not heard about the Supreme Court decision issued earlier. The two-page decision said in effect that the two fish meal plants, located on the pier, could recover from the corporation real estate taxes on both land and buildings. The fish meal plants only pay rent on the land.

The Gloucester Community Pier Assoc. faces financial bankruptcy unless a solution is found to the problem so that their assets will be greater than their annual expense.

Confer on Three Mile Limit

In an effort to solve the 3-mile line enforcement problem, Howard S. Willard, director of the law enforcement division of the Massachusetts State Department of Natural Resources, and Robert L. Yasi, chief marine officer for the division, went to Gloucester recently. They were to confer with Capt. Raymond Kershaw, manager of the Gloucester Whiting Association, whose members are shore fishermen.

"There is a lot of confusion between the exact position of the three mile line as defined by the captain of the State patrol boat and the fishing captains," Kershaw said. As many as 12 skippers have complained that their radar showed them to be well outside the limit when overhauled.

Meanwhile, shore fishermen are trying for relief through petitions. Principal relief urged by the fishermen is to have the state establish a license allowing the smaller draggers to fish inside the 3-mile limit from November 1 to May 1.

Would Remove Hulks in Gloucester Harbor

The Committee on Harbor Rehabilitation reported to the Gloucester, Mass. City Council that the Harbor situation is not up to par. The Committee made three recommendations for steps to "be taken to utilize city equipment and personnel to expedite the removal of the hulks and derelicts."

Deputy harbormaster, Raymond H. Freitas, has been authorized to get releases from owners in order to clear the hulks from the harbor. Once the releases have been obtained, demolition crews will begin breaking them and take them away. Financing the harbor clearance project appears to be another problem.

Maine Dragger Sold to Gloucester

The 75′ Rockland dragger *Rhode Island*, skippered by Capt. Wm. Howell of Southwest Harbor, has been sold to Capt. Antonio Trupiano of Gloucester, Mass. Howell is scheduled to command a sardine carrier for Green Island Packing Co., Rockland.

"Incentive" Insurance Plan Offered to Vessel Owners

An incentive insurance plan has been offered the domestic fishing fleet at Gloucester, Mass. Its authors, A. Emery Lord of Philadelphia and Munroe H. Lowitt of Baltimore, claim it will tend to reduce the number of accidents aboard ship, sharply reduce the annual cost of insurance, both hull and P & I.

Both men formed the Annapolis Fire & Marine Insurance Co. of Baltimore, Md. a year ago. They plan to charge a vessel owner 130 per cent of what he would ordinarily pay in an insurance premium, but if the boat suffers no losses in the year, the company plans to refund 70 per cent of the premium cost. "That rating makes the vessel owner, a limited partner in the company, but without liabilities", explained Lord.

Lord claimed that the U. S. Department of the Interior has endorsed the plan "because it feels such a compact is very desirable, from the standpoint of encouraging safety aboard ship, efficiency of operation, careful selection of personnel and general housekeeping."

He said the Annapolis Fire & Marine Insurance Co. is licensed in the State of Maryland as a marine insurance company. It has paid-in capital of $125,000 and paid-in surplus of $125,000. However, he adds, "we are re-insured in London to the extent that our maximum liability on any loss is only $5,000.

The rest of the liability would be absorbed by the reinsuring companies, according to Lord. He cited Lloyd's of London, as having 67 per cent of the reinsurance. Other English firms have the remaining 33 per cent.

Fish Meal Plant Expansion Slated for New Bedford

The New Bedford Fish Products Corp., manufacturers of fish meal, announced last month that the plant is operating at peak capacity after more than a two-year trial. Plans for a $400,000 fish meal plant have been made and are expected to materialize within the next six months.

Carl H. Larsen, present plant manager, claims the fish meal plant will revolutionize the industrial fishery at the port of New Bedford, Mass. The new plant will use up to 350,000 lbs. of industrial fish and fish frames each day of operation.

Ezra Levin, president of the VioBin Corporation of Monticello, Ill., and owner of New Bedford Fish Products Corp., believes that the sea holds the solution for the future of humanity. He claims his plan to exploit the resources of the sea is practical and economical and that it will solve the major problem of protein starvation facing many parts of the world.

Two New Bedford Draggers Repowered

Two New Bedford draggers were repowered and hauled recently by Norlantic Diesel, Inc., Fairhaven, Mass. The 78′ *Kingfisher*, owned by Capt. Leif Mikalson and skippered by Capt. Alf Hokonsen, has a new D375, 300 hp. Caterpillar Diesel with Snow-Nabstedt 3:1 reduction gear. The engine was sold by Perkins Machinery Co., and the yard caulked and painted the vessel, as well as installing a new 4" Tobin Bronze shaft.

The 72′ *North Sea*, owned by Captains Peter and Harman Andersen, has been repowered at Norlantic with a new NKDBSM, 315 hp., 1200 rpm. Waukesha Diesel, sold by Hathaway Machinery Co., Inc. The engine swings a new 54 x 36, 4-blade Columbian propeller, and is fitted with Snow-Nabstedt #3961, 3:1 hydraulic reduction gear and 2:1 power take-off, and American-Bosch Hydrotor starting system.

New Bedford Dock Space Survey Proposed

A survey of the New Bedford, Mass. waterfront was proposed recently by the Harbor Development Commission to find sites for additional docking facilities for the city's fishing fleet. Action was taken after it was learned extension of Piers 3 and 4 would not be feasible be-

67-Foot "Miss Point Judith" is Combination Dragger-Seiner

Much interest has been evidenced in the new 67' dragger-seiner *Miss Point Judith*, recently placed in operation out of Point Judith, R. I. She is especially designed and rigged to handle both dragging and seining, with facilities for taking advantage of the menhaden fishery as well as dragging for industrial and market bottom fish.

The new vessel was built by Diesel Engine Sales, Inc., St. Augustine, Fla., being their 779th fishing boat. She is owned by Captains Harold and Warren Loftes, who formerly had the 65' *Menco*.

Several modifications were made in the standard Diesel Engine Sales hull in order to suit fishing needs of the owners. The forward hold bulkhead was moved ahead 8 ft., providing 150,000 lbs. of trash fish hold space with cement floor, and the after bulkhead was moved ahead 4 ft. to double the length of the lazarette space so it can be used for market fish and ice. There are 4 bunks in the deckhouse, forward of the galley, and 4 bunks in the fo'c'sle.

Warren Loftes owns a plane which he uses for spotting fish, and a 40' seine boat will be used with *Miss Point Judith* in the menhaden seining season which starts June 1. The vessel has a crow's nest built of galvanized rods and plywood platform, and the mast is built up with 6", 8" and 10" pipe sections. The vessel's Linen Thread seine comprises 9,000 meshes of 2¼" twine, 750 meshes deep, rigged with Spongex floats. A crew of 8 is used for seining and 4 for dragging.

Miss Point Judith is equipped with a 6-110 General Motors Diesel, Hathaway winch, Metal Marine Pilot, Apelco telephone, Loran, Bendix radio and two Bendix depth recorders—a DR-12 for deep water and a DR-10 in feet for shoal-water operation. The boat carries a 4" Brodeur portable pump for discharging water from the hold after unloading at the dehydrating plant.

Other equipment includes Petter 1500-watt generating set, Yocam batteries and Marine Products pumps run off either side of the main engine.

Warren and Capt. Harold Loftes, owners of the new, 67' dragger-seiner "Miss Point Judith", built by Diesel Engine Sales, Inc.

Latest addition to Point Judith, R. I. fleet, 67' dragger-seiner "Miss Point Judith" owned by Capt. Harold and Warren Loftes.

---

cause of the proximity of the harbor channel. It was pointed out that a 25-ft. deep channel passes by the ends of both piers 3 and 4, and Corps of Engineers would probably prevent extension of the facilities.

Mayor Lawler has asked State aid for extension of Pier 3 some 50 or 60 feet. He said he has in mind extending of Homers Wharf. Extension of this facility as much as 170 ft. into the harbor could be made without interfering with the harbor bulkhead or channel, it was reported.

New Bedford Boats Overhaul Engines

Two New Bedford, Mass. scallopers and a dragger have had their NKD Waukesha Diesels overhauled at the Hathaway Machinery Co., Fairhaven. The scallopers were the *Jerry and Jimmy* owned by Morris Phillips and the *Porpoise* owned by Olaf Enoksen. The dragger *Christina J.*, owned by Peter Jacobsen was the third member of the fleet to have her engine overhauled.

An NKD, 250 hp. Waukesha Diesel has been installed in the New Bedford dragger *Joan & Ursula*, owned by Alonso Carriero. The vessel has been out of service since the 1954 hurricane. R. A. Mitchell Co., Fairhaven, made the installation and also put in an LD1 Lister Diesel driving a 1½ kw. Fairbanks-Morse generator. The *Solveig J.* owned by Capt. Jack Jacobsen of Fairhaven has a new Mitchell fish hoist.

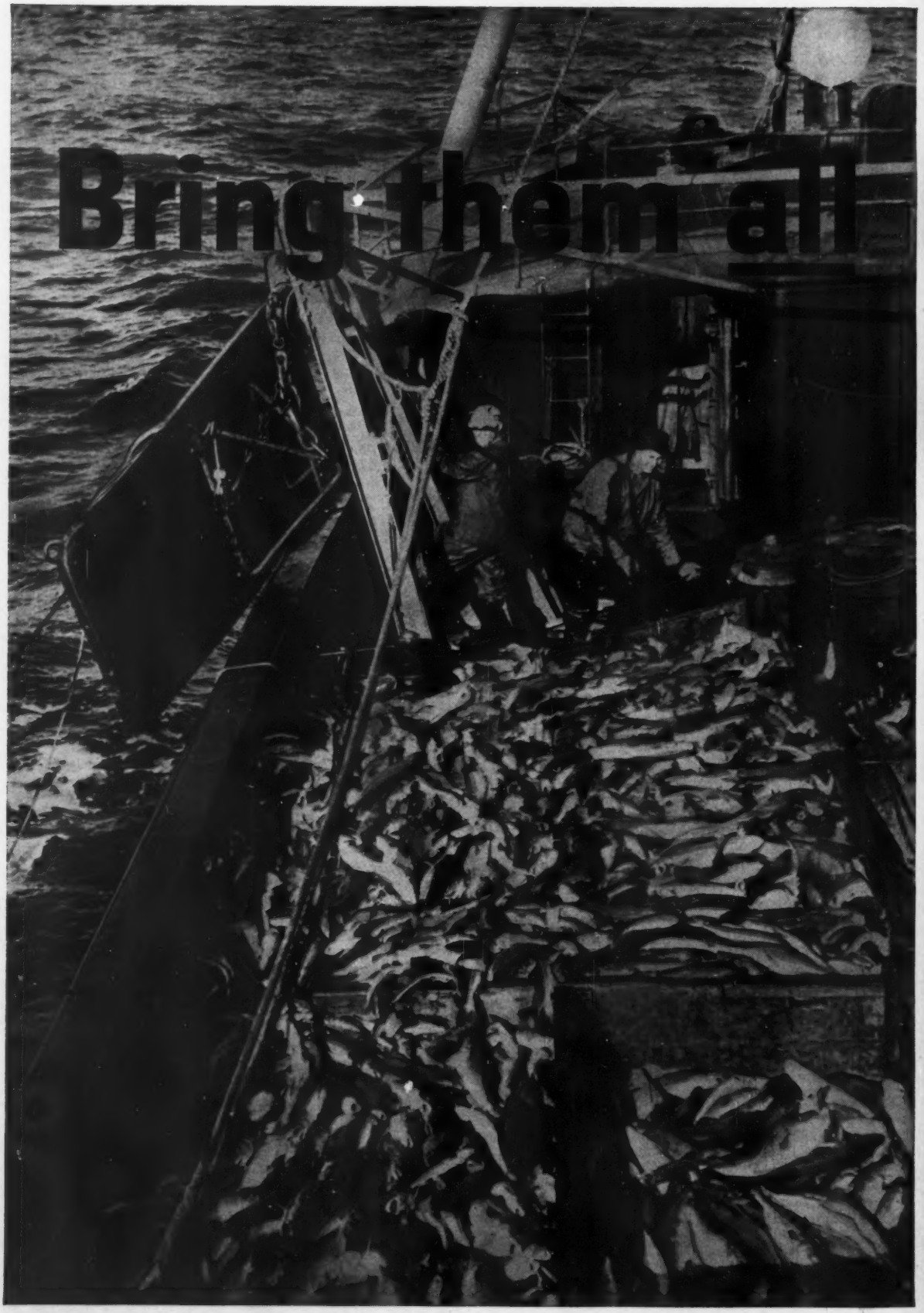
Would Require R. I. Quahaug Water Test

The Division of Sanitary Engineering of the state department of health, which directs the state's antipollution program, would be required to inspect and test the purity of tidal and inland waters of R. I. at least once every three months, under a bill introduced in the General Assembly last month. The measure is sponsored by Senators Fred J. Jannitto of Warren, Gladys Brightman of Bristol, Arthur R. Prevost of Tiverton and Frank Almeida of Portsmouth.

The state division sets pollution lines within which quahauging is prohibited in Narragansett Bay waters. The lines are fixed on the basis of tests conducted at the discretion of the division.

Plan New Marine Laboratory for R. I.

Initial planning for a new Narragansett Marine Laboratory was authorized recently by the state Board of Trustees of State Colleges. Dr. Francis H. Horn, URI president, will work out with Dr. Charles J. Fish, laboratory director, the size and the facilities that should be built into a new lab. The Marine Laboratory is a facility of the University of Rhode Island.


Bring them all

back fresh with ACRONIZE®

...the food-grade antibiotic just cleared by the government for use on fish

WHAT IS ACRONIZE? ACRONIZE is an antibiotic developed by American Cyanamid Company especially for food processing. It is the food grade of Chlortetracycline, the broad spectrum antibiotic with proven ability to retard the growth and multiplication of bacteria that cause fish spoilage.

ACRONIZE has been used for several years by the poultry industry to keep poultry fresh from processing plant to retail market. Now, after extensive experiments and trials, this proven spoilage retarder has received government clearance on fresh-caught whole, headed, and gutted fish; shucked scallops; and unpeeled shrimp.

HOW ACRONIZE WORKS—Like all perishable foodstuffs, fish are attacked by bacteria. These bacteria are very active; they grow, multiply, and soon cause souring, sliming, and eventually complete spoilage.

The use of ACRONIZE on fish slows down reproduction of bacteria. Freshness is maintained for much longer periods of time. Tests on a wide range of species prove that ACRONIZE can keep fish fresh and firm 50% to 100% longer than before possible.

HOW TO USE ACRONIZE—Because ACRONIZE does *not* eliminate refrigeration, but enormously increases its efficiency in keeping fish at top quality for a longer period of time, it is incorporated *in the ice*. Ice houses at all major fishing ports are now, or soon will be, offering ACRONIZE in their ice.

ACRONIZE is *not* a substitute for proper sanitation. On the contrary, sanitation practices, refrigeration, and ACRONIZE work together to retard spoilage, *keep* fish just-caught fresh.

After ice containing ACRONIZE is crushed and loaded into bins, standard refrigeration practices are followed. As the catch is loaded into the hold, each layer is covered with ACRONIZE ice until the hold is full. With larger fish, the polk is filled with ACRONIZE ice, and then the entire fish is iced down in alternating layers as with the smaller species.

WHAT ACRONIZE CAN MEAN TO YOU—Fish properly protected with ACRONIZE will stay ocean fresh for a longer period of time than ever before possible. This means that fish caught early in the trip can be sold at the same top quality prices as those caught just before returning to port.

For additional information, see your ice supplier, or write: American Cyanamid Company, New York 20, New York.

CYANAMID
ACRONIZE

*ACRONIZE is a registered trademark for American Cyanamid Company's chlortetracycline.

SOUTH ATLANTIC

Maryland Signs New Treaty On Joint Use of Potomac

The proposed new treaty to end the Maryland-Virginia feud over the rich seafood resources of the Potomac River was signed by Gov. J. Millard Tawes within hours of its approval by the Maryland Legislature. The new treaty would set up a six-member commission to regulate fishing and oystering in the Potomac which Maryland owns up to the low-water mark on the Virginia shore. Each state would have three members on the commission. Regulations handed down by the commission could be overridden only by joint action of the legislatures by both states.

Among major amendments written into the compact by the Maryland Legislature was one which would require advance joint legislative approval of any regulation opening the river to the use of oyster dredging, patent tonging or the leasing of oyster bottom to private operators.

Other amendments included, two members from each state must be among the four required for a quorum. Each state must contribute $50,000 a year, instead of $25,000, to help finance a program of fish and oyster propagation in the river. All fishing and oystering licenses in force on the river would become ineffective six months after the compact became law and renewals would be subject to approval by the commission. The governor of either state could call for a review of the compact at any time and recommend further amendment.

Virginia's Governor Almond signed the new Virginia-Maryland Potomac River compact on April 20. Only the approval of Congress is needed for the law to go into effect. The compact replaces the old one of 1785 which was abrogated by Maryland in 1957.

New Tidewater Fisheries Commission Begins Administration This Summer

A new agency, which Gov. Tawes hopes will give Maryland's seafood industry a shot in the arm, will begin administering the State's vast tidewater fishery this summer. The present three-member Tidewater Fisheries Commission leaves office June 1, when the department will come under the administration of a single, full-time director.

Working with the director will be five commissioners, two from Eastern Shore counties, two from tidewater counties of the Western Shore and one from the state at large. It is the director, according to Tawes' plans, who will be the key to making the reorganization work for the betterment of the seafood industry.

The five commissioners will be appointed by the governor to five-year terms, staggered so that one term will expire each year. The director will be chosen by the commission, but subject to approval of the governor. He will have a free hand to discuss with the governor, at any time, functions and operations of the department.

The reorganization act specifies that the Commission cannot adopt any regulation that would supersede any law now on the books, and its actions will be subject to legislative veto.

Kent County Clam Bill Passed

The signature of Maryland Governor, J. Millard Tawes, will make the taking of soft-shell clams legal in Kent County waters. The clam bill includes a provision for a referendum in November, 1960 by qualified voters of the county. If approved, clamming will continue under the present bill effective June 1, 1959. If it is disapproved, clamming will cease in Kent waters after May 31, 1961.

Maryland Rockfish Bill Killed

The 1959 version of the Maryland Legislature's rockfish bill, to ban the catching of rockfish or striped bass in Maryland waters during January and February, was defeated by a 67-50 vote of the House. Sport fishing interests proposed the bill, contending that big catches by commercial fishermen during those months deplete the supply and endanger that industry.

Del. Harrison pointed to testimony given at a Chesapeake Bay and Tributaries meeting as showing conclusively there is no danger of depletion. He said experts testified before the committee that both sport and commercial fishermen had found an abundant supply last year.

Virginia Oyster Mortality Study a Protective Measure

The Virginia House of Delegates passed an emergency bill recently approving $60,000 for a research station on Virginia's Eastern Shore. The Virginia Fisheries Laboratory will move quickly to get the oyster mortality project started. The Senate also has approved the bill.

The basic aims of the program as outlined by Dr. William J. Hargis, acting director of the Virginia Fisheries Laboratory are: (1) to increase knowledge of the factors involved, (2) to provide a monitoring program in which signs of the cause can be recognized so that advice can be given to the industry, and (3) to develop control measures. Howard H. Adams, who offered the bill said: "The situation that has developed in Delaware Bay could develop in Virginia waters." The bill provides for an appropriation of $19,530 for the fiscal year ending June 30, 1959, and an additional $39,300 for the fiscal year ending June 30, 1960.

The studies will be a part of a cooperative program with New Jersey, Delaware, Maryland, and Virginia, with the Fish and Wildlife Service participating. To staff the new station, the laboratory will employ a pathologist, a field biologist, a micro-technician, and two laboratory assistants.

Virginia Offers Student Program

The Virginia Fisheries Laboratory at Gloucester Point, through a National Science Foundation grant, is offering undergraduate students majoring in biology an opportunity to pursue their studies at Gloucester Point, between June 1 and August 31. The objective of this program is to offer undergraduate marine biology majors the opportunity to spend the summer in an active research institution and participate in research projects conducted by experienced scientists.

Dr. William J. Hargis, Jr., laboratory director, said the students will, have close and informal contact with the work of their immediate supervisors and other staff members. They will attend classes, seminars and field trips to gain experience of a type that cannot be obtained on a college or university campus.

Each student will carry out an investigation of his own under the supervision of a senior staff member. Special equipment needed for approved studies will be supplied free of cost, and where field trips for collecting materials are necessary, the cost will be borne by the foundation grant. Students will attend seminars at which staff members, graduate students and visiting scientists will present informal papers and lead discussions in marine science and allied field. This introduction to the broad field of marine biology will be supplemented by lectures on topics within the field of interest of staff members. The cost of room and board will be covered by the grant from the Science Foundation. In addition, students will be assigned work as assistants to research personnel at the Laboratory up to a maximum of 40 hours a week for which they will receive $1.00 per hour.

Florida Leaders Oppose New Tortugas Shrimp Bill

Leaders of the Florida shrimp industry have expressed concern over a move by Rep. Ralph E. Cunningham, to have the Legislature repeal the Dry Tortugas shrimp conservation measure. They declared the conservation act is vital to the local shrimp industry and called unanimously for its preservation.

Conservation Director, Ernest Mitts of the Florida House, and R. M. Ingle, research director of the State Board of Conservation, issued a statement defending the act which permits a feeding ground area in the Tortugas to be closed when shrimp taken there fall below 50 to a pound, headless.

They declared that "production of all the leading shrimp producing areas of the Atlantic and Gulf Coasts, except Tortugas, has fallen off." The Tortugas yielded 8 million pounds more in 1958 than it did 1957, despite closed shrimping.

The bill would reduce the area which may be closed by the conservation department and also would reduce penalties for violation. It provides that the 1957 act "shall not apply to the area between the northern boundary and a line six miles south of and parallel to the northern boundary." This would reduce the closed area to a strip about four miles wide and 37 miles long. Mitts said the part that would remain cannot be shrimped anyway because of the rough bottom.

Cunningham's measure would repeal provisions which empower the state to require the issuance of permits for landing shrimp in Florida. It is through the permits that the conservation department can enforce Tortugas closing since the area itself lies outside the state boundary.

Shrimp dealers and captains say those seeking the repeal are small operators from outside the state with no substantial stake in the Florida industry.

Fish, Shellfish up 7 Million in 1958

Commercial catches of Florida fin fish in 1958 totaled about 2 million pounds more than the 1957 returns, according to a recent report. Catches of shrimp last year were approximately 5 million pounds greater than in 1957 although seining conditions were not always favorable. Landings from the Tortugas shrimp beds were reported to have been 8 million pounds heavier than those from the Campeche area. Mullet catches were larger by 1 million pounds thereby reaching 34 million pounds.

Hampton Roads Landings Increase

Dragger landings in the Hampton Roads, Va., area during April totalled 3,398,000 lbs. from 84 trips compared to 2,900,000 in the same month last year. The leading variety was scup (porgy) with 2,409,000 lbs., or more than double the April 1958 catch. The fluke and whiting catches also were up.

The Virginia dragging season is running longer than usual this year, with 10 vessels still landing at the Isaac Fass, Inc. plant in Portsmouth early this month. Production from the pound nets and haul seines is underway, with substantial catches of croakers, shad and alewives being made.

Georgia February Landings Up

Landings of fish and shellfish in Georgia during February 1959 amounted to 501,000 pounds. This was 319,000 pounds greater than for the same month the year before. Bluecrab and shad accounted for 81 percent of the total in February. Shrimp and oysters comprised the remaining 19 percent. The crab catch was almost five times that of February 1958.

Built by Morehead City (N.C.) Shipbuilding Corp. for V. P. O'Neal, Morehead City, "Captain Puck" has a 6-71 General Motors Diesel. The 55' trawler carries Surrette batteries, Onan generator, Apelco radio telephone, Hathaway hoist, and Raytheon Fathometer.

Menhaden Have Natural Tags

Where menhaden caught in Virginia come from is a question which biologists at the Virginia Fisheries Laboratory, Gloucester Point, are eager to answer. Tags are often applied to fish when scientists want to learn about their migrations, or seek information about where they hatched and grew up. The Virginia biologists believe that parasites can be used as natural tags. If young menhaden pick up parasites in the rivers and estuaries in their youth and retain them through winter migration to the ocean, it may be possible to locate the home port for fish caught anywhere the following year.

It may be that young menhaden from the Delaware Bay or in Albermarle Sound, or some other section, will carry different parasites, or may differ in degree of infestation with the same parasite from those in Chesapeake Bay. They hope eventually to locate the home waters for fish taken in the commercial catches by examining the external parasites living on the fish.

Fass Expands Icing Facilities

Issac Fass, Inc., Portsmouth, Va., has completed its new ice plant which provides more than double the previous capacity. Three new 20-ton North Star ice making machines have been installed, which can produce 60 tons of crushed ice every 24 hours. Ice storage capacity has been increased to 130 tons. Stanley Fass, general manager of the firm, was elected a director of the National Fisheries Institute last month.

Raymond Lee Haynie, Jr.

News of the death of Raymond Lee Haynie, Jr., in April was a shock to his many associates in the fishing industry. Haynie, president of Reedville Oil & Guano Co., Inc., Reedville, Va., was a member of the National Fisheries Institute. He served that organization as a member on the Executive Committee of the Industrial Products Division almost from its beginning and as chairman in 1954-55. He also served as a Director of N.F.I. Several years ago he was selected by the Secretary of the Interior as a member of the American Fisheries Advisory Committee.

"LADY IRMA", 57' shrimp boat owned and captained by Anthony Vukas, Beaufort, S. C., is powered by a General Motors 6-71 Diesel with 3.7:1 reduction gear swinging a 5-blade Federal propeller on a 3" Columbian bronze shaft. She has Goodrich Cutless bearing, 515½T Stroudsburg hoist, Columbian rope, Apelco radio, and uses RPM Delo lube oil.

South Carolina Crab Catch Has Big Potential

According to Dr. G. Robert Lunz, director of Bears Bluff Laboratories at Wadmalaw Island, the state's commercial crab need not be a "tributary" to the heavy Chesapeake Bay production. The South Carolina catch last year reached 5 million pounds.

Lunz stated that the time must come when South Carolina will not have to continue its tributary status by being what he called a sort of stand-by fishery which is called upon when production is slack and price is high in other regions.

Not only do South Carolina fishermen benefit greatly from the crab industry, but the state also derives direct taxes from crabs processed in the state and those shipped outside the state.

Would Amend S. C. Fishing Law Bill

An amendment proposed by Rep. Talbird R. Sams, to a bill calling for the recodification of South Carolina's commercial fishery laws, would prohibit shrimping in Port Royal Sound beyond an imaginary line. The line would extend from Hilton Head Island to St. Helena Island, on the offshore side. At present, shrimping is prohibited in the sound about three miles inshore, beyond a line designated by buoys and natural landmarks.

G. Robert Lunz, director of Bears Bluff Laboratories, said although the proposed amendment was a good conservation measure, it was overshadowed by the confusion it would cause and the additional hardship of law enforcement. The area involved represents less than one percent of the shrimp catch in Beaufort County, Lunz said.

Antibiotic Expert Visits S. C. Lab

The College of Charleston's marine biology laboratory at Ft. Johnson may be used by a pharmaceutical firm seeking new antibiotic elements. A research group has become interested in the marine field for these medical elements, now taken primarily from the soil.

Dr. Joseph R. Merkel, director of the laboratory, said nothing definite has been done toward the research program. The laboratory was host, however, to Dr. Boyd Woodruff, head of microbiological research for Merck, Sharp and Dohme, the firm that conducts research for Merck & Co., of Rahway, N. J., manufacturer and supplier of chemicals.

Antibiotics Use Authorized For Commercial Fishermen

The use of an antibiotic to aid in keeping fresh-caught fish in sound condition has been authorized for the first time by the Food and Drug Administration in an order setting a safe limit on the amount that may remain in these foods without harm to the consumer.

The FDA order allows commercial fishermen to use an antibiotic known as chlorotetracycline on fresh-caught whole, headed, and gutted fish, shucked scallops, and unpeeled shrimp. It does not allow use of the antibiotic on processed seafood products, including fish cuts, steaks, and fillets, peeled shrimp, and shucked oysters. FDA pointed out that chlorotetracycline has been used on uncooked poultry since 1955 and extensive data on its safety are available.

A minute amount will remain in fresh seafood treated with the antibiotic and will not always be removed in cooking, the agency said. FDA scientists and physicians have determined from all available data and feeding tests that this amount of chlorotetracycline can be consumed without harm, even to the very few exceptional persons who may have developed a sensitivity to antibiotics.

The law requires the label of treated seafood products to show the fish contains chlorotetracycline and that it has a preservative effect, FDA said.

Commercial fishermen will use the antibiotic as a dip or in the ice as an aid to keeping their catch in sound condition. They may not use the antibiotic in place of adequate refrigeration, nor, because of its use, neglect to maintain thoroughly clean conditions aboard their boats for assurance of clean, wholesome seafoods, FDA emphasized.

The FDA order sets 5 parts per million as the maximum amount of chlorotetracycline that may legally remain on fresh-caught, unprocessed seafood. The FDA action was taken in response to a petition by American Cyanamid Company, New York City.

North Carolina Considers Dredging Shell Deposits

Five North Carolinians flew to Galveston, Tex., recently to observe the dredging of shells in Galveston Bay. Making the trip were Dr. A. F. Chestnut, director of the Institute of Fisheries Research, Morehead City; C. G. Holland, state fisheries commissioner; Dr. J. L. Stuckey, state geologist, Harry Cornell, chief of the fisheries division of the Wildlife Resources Commission, and former state senator N. E. Aydlett of Elizabeth City.

They observed the dredging of dead marine animals shells, which are imbedded under mud. Chestnut said an estimated 140,000 cubic yards of shells are taken from the bay annually. They are commercially valuable for their calcium and are used by the large chemical plants of Monsanto and Dow, in a $15 million annual industry. Cement plants crush them for use in cement. Other plants grind them and bag them to furnish grit for poultry, while asphalt-making concerns mix the shells with asphalt to provide a long-wearing road surface.

In 1953, a check of the North Carolina coastline for shell deposits found 30 million cubic yards in Currituck Sound. Chestnut said that from this superficial examination it was estimated that 100 million cubic yards were probably available. The prospect of shell dredging at that time disturbed some of the fishermen and hunters, but other coastal interests, such as the Elizabeth City chamber of commerce, hope that maybe the work can be undertaken on a small scale.

Dr. Chestnut said that the work in Galveston Bay appears to benefit shrimping. In the area where the dredging was going on, shrimp catches were larger. The dredging is beneficial also in that nitrates and phosphates are released.

GULF OF MEXICO

Approve Texas Shrimp Conservation Bill

The Texas Shrimp Association has endorsed a bill, which according to John Mehos, chairman of the Association's conservation committee, is a conservation measure. The object of the bill is solely to conserve the shrimp supply in the waters of the northwestern Gulf, off the Texas coast. Introduced by Maurice S. Pipkin, the measure is now in the hands of the State Game and Fish Committee.

The origional bill presented to the Legislature has been amended, revised, and rewritten, but the Association feels that it may lead to the passage of more adequate legislation in the future.

A meeting was called by the Laguna Madre Fisherman's Association to discuss the bill. A committee was formed to approve or reject the measure. The committee made up of bait dealers, and bait and commercial shrimpers agreed to support the bill providing parts of two amendments are dropped.

The committee disagrees with the amendment which would limit transportation of bait shrimp to adjacent counties only unless the shrimp are packaged and frozen. They also oppose the amendment designed to permit commercial shrimpers to pull a bait trawl during the closed season and sell legal count shrimp for human consumption.

New Texas Ship Channel

Work is expected to start this year on the 17 million-dollar Matagorda ship channel which will bring deep water to the area. Calhoun County Navigation District plans early commencement of work on a public dock for ocean-going vessels on its land at the terminus of the Matagorda ship channel.

Engineering studies are nearing completion for the Gulf entrance. Construction funds for the channel and jetties await Congressional approval. When dredged, this channel will open up a 125-mile strip of the Texas coast now behind barrier islands and without access to the deep waters of the Gulf of Mexico.

Bill Sets Closed Texas Shrimp Seasons

A bill setting closed seasons on shrimp fishing on the Gulf Coast was passed by the Texas House and sent to the Senate recently. The measure would provide an open season on shrimp in the inside waters of the Gulf Coast from August 15 to December 15. In outside waters, a closed season would be set from June 1 to July 15. The proposal would empower the State Game and Fish Commission to vary the season 15 days earlier or later.

Texas Catches Up Regardless of Storms

Despite adverse weather in March, which affected shrimp production along the Texas Coast, approximately 2 percent more shrimp were caught than during the previous month. Production of finfish was up in most ports. Red snapper led in poundage in the Galveston area, with drum, speckled trout, and redfish being the heavy producers in the Coastal Bend.

Crab landings in the Matagora area were up during March also. The supply was plentiful and crabs gave a good yield. Several fishermen claim there are more crabs this season than during any that they remember.

Shrimper-scalloper, the 40' "Runnel" owned by Hilton Barnes of Bayou LaBatre, Ala., is powered with a 99 hp. Oliver Diesel with a 2:1 Snow-Nabstedt reduction gear. She is equipped with Surrette batteries, Wickwire wire rope, and a Stroudsburg hoist.

Texas A&M Has New Visceration Process

Texas A&M College last month announced a new process opening possibilities of a huge new food supply for the world. The college reported it now can remove the scales and inner portions of small, previous unwanted fish by using a chemical. The process leaves only the flesh and bones. These can be made into a fish flour with a protein content as high as 90 per cent.

To fishermen, the new process can mean more money and less work. On the average, shrimpers get about six pounds of rough fish to every pound of shrimp taken in trawls. Under laboratory conditions Dr. W. W. Meinke, laboratory manager and his staff, converted such waste fish into products with a value of $34.76 a ton at a cost of $27.86 a ton.

Meinke said the process has possibilities for processing sardines and mackerel by the canning industry. Whole small fish are placed in tanks with an enzyme solution. An enzyme is a complicated compound used in animal and human digestion and now produced chemically.

The solution loosens the scales and digests the viscera. The carcasses are removed and washed for food processing, the scales used for their mineral content and the soluble matter for poultry feeds—with a value of $80 to $100 a ton.

Marine Institute Laboratory Okayed

Improvement of the Institute of Marine Science at Port Aransas, Tex. and construction of a new $300,000 laboratory have been authorized by Governor Daniel recently. Also under the Woolsey bill passed by the House, money was provided to purchase a piece of land with a water front from 100 to 300 feet to provide dockage facilities for boats used by the Institute.

Lanier Cox, vice president of the University of Texas, explained the new installation is part of the University's building program. However, permission of the Legislature is necessary for any building off the Austin campus.

Gulf Landings Rise Despite Weather

Landings of seafoods at Gulf states' ports for the first three months of 1959 show an increase in the production of edible finfish, blue crabs and oysters over the same period during last year despite prevailing bad weather. Shrimp landings at principal ports in the five Gulf states to April 1 totaled 9.5 million pounds, which is below that for the preceding year.

Edible finfish production of 2.2 million pounds is an

Largest All-Nylon Fishing Net in the world . . . A STARR NET

Now 3 years old and still breaking all records!

"We've already caught 8,000 TONS of Tuna — 4 times as much as the nets formerly used!"

That's what Capt. Anton Misetich of the *ANTHONY M* claims for his STARR Nylon Net, reportedly the largest in the world.

Like Capt. Misetich, more fishermen now are using STARR Nylon Netting because it catches bigger sets and holds *all* the fish in a set.

Made from 100% DuPont Nylon, Starr Netting, light in weight yet super rugged, handles easier, lasts longer, wears better. It's fish for keeps with STARR Nylon — the big name in commercial fish netting today.

STARR NETTING . . . STAR PERFORMANCE

STARR NETS

A. M. STARR NET CO.
EAST HAMPTON, CONN., U.S.A.

increase of one quarter of a million pounds over the same period last year. Blue crab production for the first three months of the current year was 2.25 million pounds, as compared with 1.2 million pounds in the corresponding period in 1958. Oyster production was 195,000 barrels since January 1, as compared with 190,000 barrels for the same period in 1958.

Mississippi Oyster Reefs Inspected

A recent inspection trip of the Mississippi state oyster tonging reefs produced satisfactory results, according to Inspector Clarence Canaan of the State Seafood Commission and Mayor Francis Hursey of Pass Christian. Canaan said the inspection showed what conservation will do. He pointed out that it was the first year that the tongers have used the three-inch oyster. The men who handled the little oysters culled them carefully and the reefs now are almost 100 per cent oysters.

The inspector added that in his 15 years with the commission he had not seen anything pay off like the handling of the reefs. If nothing happens, such as a severe storm or disease, next year should be one of the most successful ever experienced. There will be plenty of oysters for the tongers and steamers.

Thread Herring for Pet Food

Preliminary tests and research conducted by the Fish & Wildlife Service at Pascagoula, Miss. and private factory owners appear to have uncovered a new source of supply for fish processing plants and pet food canning companies located in the area. Thread herring, which school in large quantities in Gulf waters, recently reacted favorably to preliminary tests conducted by local cat food manufacturers.

The cat food manufacturers processed a portion of an 80-ton catch made by the 63-ft. trawler *Star Dust* owned by the Castigliola Shrimp Co. of Pascagoula. The exploratory vessel the *George M. Bowers* left Pascagoula early last month for Florida waters to continue trawling for the thread herring. The *Bowers* was to be joined there by the *Star Dust* and two Florida trawlers.

A new type modified lampara net is being used in trawling for the thread herring. This type of trawl has been used in Pacific and European waters, but is new to the Gulf waters. It can be adapted to small trawlers and is more efficient than nets previously used.

Alabama Group Wants Relaxed Law

Bayou la Batre steam oyster plants may not open this year unless Sea Foods Division personnel relax strict enforcement of the culling law and open private reefs to unlimited oyster production. Oystermen said the two factors have kept plants from opening this season and have hurt the economy of the town.

A delegation of about 25 men made an appeal recently to State Conservation Director Claude D. Kelley in Montgomery. The group said the Sea Food Division inspectors usually have relaxed enforcement during the short steam plant season—lasting from one to six weeks.

Kelley told the group he could not relax enforcement of the law on public waters but said he would seek an attorney general's ruling on whether the private reefs could be produced as the owners saw fit.

Sea Food Association Elects Officers

The Alabama Sea Food Protective Association, a group organized in South Alabama to aid conservation authorities in the enforcement of fishing regulations, last month announced a slate of officers for the coming year, with Albert Johnson of Heron Bay as president. The group represents seafood interests from Bayou la Batre, Coden, Dauphin Island and Heron Bay.

Other officers named were Carl Johnson, Coden, vice-president; Nelson Guise, Heron Bay, secretary; and Clyde

Sprinkle, Heron Bay, treasurer. Elected to the board of directors were Claude Noel, Coden; Nick Johnson, Coden; George Thompson, Jr., Heron Bay; Harry Jemison, Bayou la Batre; William Steiner, Bayou la Batre; James Zirlott, Heron Bay; Arnold Collier, Dauphin Island; Curtis Pervita, Dauphin Island, and John Kurley, Bayou la Batre.

Alabama Seafood Inspector Resigns

Sidney Paul Landry, former chief inspector of the State Conservation Department's seafoods division, was cleared of charges of misconduct last month. But Landry, fired Feb. 9 from the job he had held for 12 years, promptly resigned to remain in his new post as manager of the crab-packing division of Ramos Shrimp Co., Bayou la Batre.

Landry, one of the employees ousted during Gov. John Patterson's purge of the Conservation Department, was cleared of accusations he failed to carry out his official duties or properly care for state property under his supervision.

Louisiana Commission Gets Cultch Bids

Sealed bids for the furnishing and planting of 50,000 cubic yards of shell to serve as oyster cultch for seed oysters have been received by the State of Louisiana, according to the Chief of the Oyster and Water Bottoms and Commercial Seafood of the Louisiana Wildlife and Fisheries Commission.

The bids are for the furnishing and planting of 33,500 cubic yards of shell in Black Bay and in the Lake Fortuna area east of the Mississippi and for furnishing and planting of 16,500 cubic yards of shell in the vicinity of Half Moon and Petit Pass Islands in Lake Borgne and Mississippi Sound.

Helicopters for Fisheries Department

The Louisiana Department of Wildlife and Fisheries acquired three $40,000 helicopters this month from the Louisiana National Guard. They will be used to enforce the game laws of the State, particularly regarding migratory game, shrimp and oyster violations; to pinpoint stream and river pollution; and for aerial photographs of certain areas. The Wildlife and Fishery Department is the first State agency to own helicopters.

Louisiana Oyster Lab to be Built

A laboratory for the oyster division of the Wildlife and Fisheries Commission for use in oyster and other marine research will be constructed on the west end of Grand Terre Island near Old Fort Livingston. The lab which will be built at a cost of over $180,000 will consist of a frame building constructed on a reinforced concrete deck supported by timber piling.

The complete installation will include the laboratory building, a fresh water cistern with a capacity of approximately 40,000 gallons, and an elevated salt water storage tank with a capacity of about 4,000 gallons.

Builds Fish Meal Plant

Terrebonne Fisheries was scheduled to begin operations the first of May. The plant, constructed at Chauvin, La., will handle some 200 tons of raw fish per day. Approximately 50 tons of fish meal will be produced each day and sold to feed dealers primarily marketing poultry feed. The plant is expected to be a boon to local fishermen who will thus have a market for many of the fish that up to now have been thrown away.

GRAYMARINE

"The Most Dependable Engine I Ever Had!"

George Sheaves, New Westminster, B. C., owner of Gillnetter "Miss Lorelei," below

Northern Engine & Equipment (B.C.) Ltd.
396 West 5th Avenue
Vancouver, B.C.

I have owned many engines, but never one as completely troublefree as the Gray V8. This is the sweetest running and most dependable engine I have ever had.

The Gray V8 gives my boat an easy 15 M.P.H. Cruising at 11-12 M.P.H. my fuel consumption is very economical.

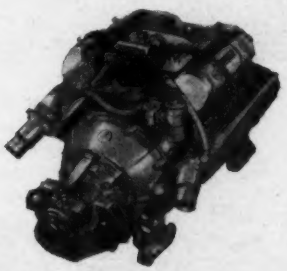
This engine really has the power when I need it, but she will also idle all day long without a miss.

I am certainly glad that I installed the Gray V8, and I would recommend this engine to any commercial fisherman who wants power, speed, economy and dependability.

George Robert Sheaves

Graymarine Fireball V8's are available at 135 hp, 170 hp, 188 hp and 225 hp. "Miss Lorelei" is powered by 225-hp model (right)

Gray Also Builds the Finest 4- and 6-Cylinder Gasoline and Diesel Marine Engines



SERVICED WHEREVER BOATS ARE USED
FACTORY APPROVED PARTS EVERYWHERE

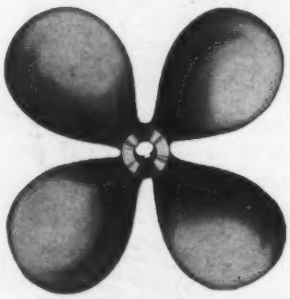
GRAYMARINE
GRAY MARINE MOTOR COMPANY
DETROIT 7, MICHIGAN

MICHIGAN STAR...

Sweetheart of the fishing fleet

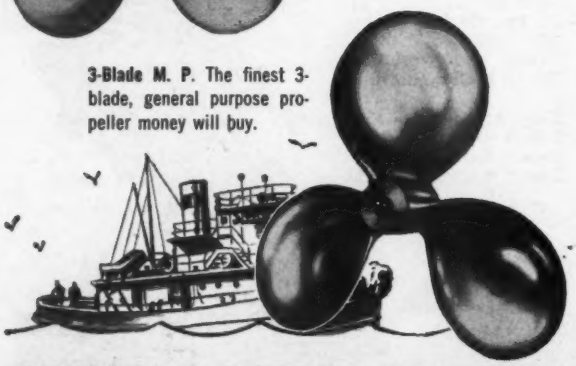
Skippers by the hundreds have fallen head-over-heels in love with this wheel . . . It's SO SMOOTH. If vibration, stern thump and loose fittings and seams have gotten on your nerves, try the STAR. It will completely eliminate them while giving you exceptionally fine performance in the normal RPM range . . . plus better than average fuel mileage.

Whatever your propeller problem may be, however, there's one way to be mighty sure of getting the finest performance and the longest lasting service your propeller dollars will buy. Insist on a MICHIGAN WHEEL of that tough MICHALLOY-K that outlasts ordinary bronze 3 to 1. (Standard for all MICHIGAN commercial wheels). See your MICHIGAN dealer or write for a Propeller Analysis Form for a FREE expertly engineered propeller recommendation that will give your craft the finest performance of which it is capable.



4-Blade WORKHORSE — Provides plenty of blade area for craft having limited propeller space.

3-Blade M. P. The finest 3-blade, general purpose propeller money will buy.



MICHIGAN WHEEL COMPANY
GRAND RAPIDS 3, MICH.

Maintaining Salmon Stocks

(Continued from page 9)

and the Columbia River, invariably blame the many dams in the rivers, up which the salmon return to spawn. As the salmon will only spawn where it first saw life, it will return to that spot, or die in the attempt.

In the Bristol Bay area of Alaska, Japan is being severely criticized for plundering the red salmon. In 1954, the Japanese government broadened the scope of its Pacific high seas fishing, when Russia restricted her operations off Kamchatka. The Japanese then moved closer to the Alaska side of the Bering Sea. With a fleet of catcher boats serving large motherships equipped with canning facilities, the total annual pack was increased from 513,633 cases in 1954 to 2,085,227 cases in 1958.

The Fish and Wildlife Service, after years of scientific research and conservation to create a sustained yield, is trying to put a stop to the wholesale taking of salmon. The reason it can not is an agreement between the United States, Canada, and Japan, made when the North Pacific Fisheries Commission was established in 1953.

While Japan was prohibited from fishing on the American side of 175 degrees west longitude, her fishermen found a veritable salmon rendevous on the Asiatic side, including salmon which had spawned in Alaskan waters. Until recently, the where-abouts of salmon from the time they left the fresh water streams until their return has been a mystery. Now, scientists have proved that, just as eels congregate in the Sargasso Sea, American and Asiatic stocks of salmon intermingle.

The largest salmon is the King, called "Chinook" on the Columbian River, "Spring" on Puget Sound, and "Tyee" in British Columbia. With a life span of four to six years, it is the only variety that can be caught in coastal waters throughout the year, though few are caught in winter. It averages 22 pounds and some have been caught in excess of 100 pounds. A great part of this catch is not canned, but marketed fresh, frozen, and smoked.

Red salmon, called "Sockeye" in some areas, averages 7 pounds and has a life cycle varying from four to six years. Silver, commonly known as "Medium Red" or "Coho", averages 8 pounds and has a life span of two years. Pink, although the smallest of the five salmon, makes the largest contribution of all the canned salmon pack. Averaging 4 pounds, it returns to spawn and die after two years.

Chum, averaging 9 pounds and with a life period varying from three to five years, is the cheapest salmon. Although pale in color and lowest in price, this salmon ranks on a par with the others in nutritive value.

Just as the group of rings around the trunk of a tree denote its age, the life period of Pacific salmon has been determined by the scale which shows a group of rings for each year of growth. By examining the little ridges along the scales, scientists can also tell just how long the salmon has remained in fresh water and how long it lived in the sea.

It is the life cycle of the salmon that is of greater interest, and it is a spectacular sight to see the great hordes surging up the stream and leaping over waterfalls. The movement of salmon to the spawning grounds is known as the "run". It occurs when salmon have reached the apex of their physical maturity and perfection needed to carry them upstream, often up hundreds of miles of swift turbulent water. A mysterious instinct directs the vast majority to the very river down which they once traveled as baby fish, and to the same spawning grounds where they were born, to produce the next generation. At this time they cease feeding, and pair-off upon reaching the spawning grounds.

Both parent salmon die within a few days after spawning has been accomplished, in the fall. This wise provision of nature to prevent overstocking the streams was made incongruous by the appearance of man to upset the finely-poised balance.

Salmon are caught by four methods: gillnetting, purse seining, trolling, and traps. Most salmon are feeding when caught by hook and line method of the small trolling boats, and the physical condition of the fish lends itself better to marketing fresh, frozen or cured.

Traps have a lead line running from shore to guide passing fish into the trap. This method has accounted for approximately 40% of the annual Alaska salmon catch. Abolition of traps, an economical and efficient method of catching salmon, has caused a loud protest by the owners, mostly in the state of Washington, who claim their gear will now be worthless.

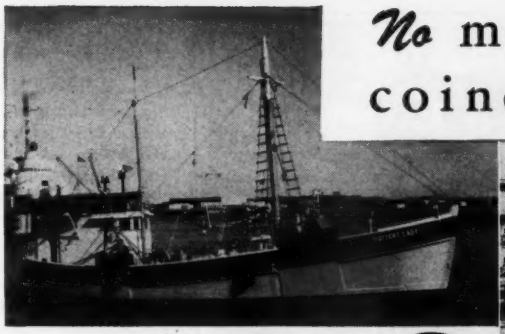
Two-way radio now has an important part in the salmon industry. Fishermen are told where fish are teeming and tender captains keep in close touch with the cannery. Refrigerated tenders, a recent development, receive salmon from fishing vessels, delivering the fish to the cannery in prime condition. Power has replaced sail on the small fishing boats of Bristol Bay, one of the world's important fishing areas.

To insure that the industry may continue, conservation measures have to be enforced. The approach to the problem is to realize that salmon, like the forest, is a crop. The harvest must be limited to what the run can bear, permitting sufficient numbers to spawn and increase the runs of following years.

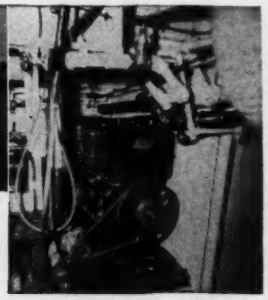
Provisions have been made for fishways around dams of the Columbia River and numerous smaller rivers at a cost of many millions of dollars. The rehabilitation of salmon in the Fraser River in British Columbia is a shining example of what can be accomplished by nations agreeing jointly to manage their resources. When builders of the Canadian National Railway blasted down a cliff at Hell's Gate Gorge, a canyon in the Fraser 120 miles up-stream from Vancouver, debris clogged the river and the prolific salmon supply was almost decimated.

In 1937, with the Fraser—once the world's greatest salmon fishery—virtually written off as a source of red salmon, the International Pacific Salmon Fisheries Commission was created by treaty between Canada and the United States. Two giant flumes were built to let the salmon through Hell's Gate Gorge at all water levels. Fishing was regulated in both Canadian and American waters, and the revival of bonanza salmon runs on the Fraser has been, very likely, the greatest fishing accomplishment of the century.

With fishing limited in many areas and closed entirely in certain sections, replenishing the salmon seemed a possibility. Then Japan upset the fish cart by her high seas fishing operations in the North Pacific.



No mere coincidence!



ANOTHER *Lister* for New England's Fishing Fleet

Above left: "Valiant Lady": Capt. & Mrs. Antonio Vasquez, Fairhaven, Mass., owners.
Above: "Valiant Lady's" Lister SL2 air-cooled diesel auxiliary.

VALIANT LADY, new Lister-powered dragger, continues Lister's exceptional record of providing dependable, economical auxiliary power for more than ¾ of New England's fishing vessels. Her air-cooled Lister Model SL2, 8½ HP @ 1800 RPM, furnished by Diesel Engine Sales & Engineering Corp. of Boston, provides power for the auxiliary unit, driving a 5 KW Kurz & Root Generator, Marine Products pump and a bronze winch head on the deck side of the engine trunk for taking out fish.

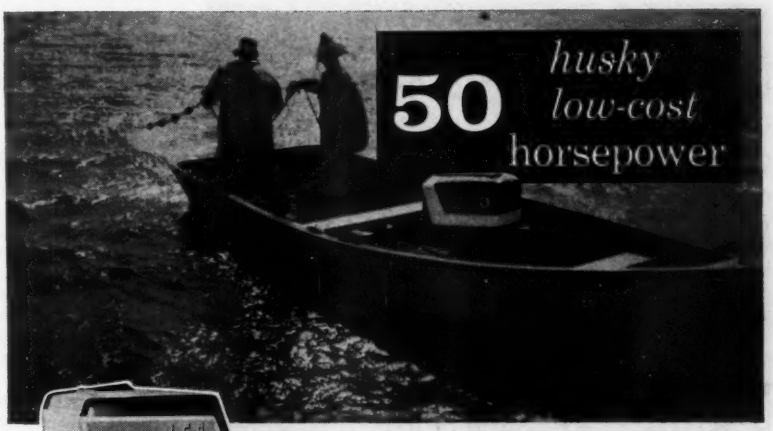
Compact, space-saving, air-cooled Listers start immediately at temperatures from sub-zero to 130°F.; provide auxiliary power for all vessels, propulsion for medium sized boats. 3½ to 30 BHP., 1, 2 & 3 cylinders.

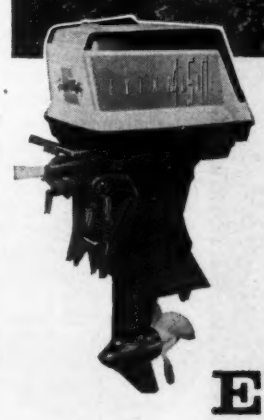
Distributorships available in some areas

LISTER-BLACKSTONE, Inc.

42-32 21st Street, Long Island City 1, N. Y. Tel.: STillwell 6-8202

In Canada: Canadian Lister-Blackstone, Ltd., 1921 Eglinton Ave. E., Toronto 13, Ont.





Here's the one for rigs that need *real* power . . . Evinrude's great "Four-Fifty." New, compact V-4 design. 70.7 cu. in. displacement. Delivers 50 solid b.h.p. at 4500 revolutions—easily, smoothly, quietly—in toughest day-in, day-out service. See your Evinrude dealer—he's listed in the yellow pages under "Outboard Motors." Complete range of models to choose from. Evinrude Motors, 4152 N. 27th Street, Milwaukee 16, Wis. *A Division of Outboard Marine Corporation. In Canada: Mfd. by Evinrude Motors, Peterborough.*

EVINRUDE

***quiet* outboard motors**

MULE Battery
IT HAS THE KICK
TRADE MARK REG. U. S. PAT. OFF.

The Storage Battery that
'Can't Corrode Cables'

Specially made Marine Batteries for all types of Engine Starting and Lighting Needs, 6 to 110 volts

All Acid Sealed to Stop Terminal Corrosion

MULE Batteries are Standard Equipment on all Blount Built Boats—Ask Luther.

MULE Battery Mfg. Co.
45 River Ave., Providence 8, R. I.
Phone GAspee 1-1663

OF COURSE, A NYLON NET IS BETTER
AND THE BEST NYLON NETS
ARE MADE OF NYLOCK®
BONDED
NYLON TWINE
EXCLUSIVE U. S. PATENTED BONDING PROCESS NO. 2590586 GIVES EVERY NET ALL OF THESE IMPORTANT ADVANTAGES:

- Knot slippage practically eliminated
- Nets last much longer due to greater abrasive resistance
- Nets stay cleaner, whiter longer
- Nets have much greater resistance to marine organisms

HEMINWAY & BARTLETT
Write for full information to
The Heminway & Bartlett Mfg. Co.
500 Fifth Ave., New York 36

Air Curtain Concentrates Herring

(*Continued from page 13*)

due to strong tides lifting the seine. One of the six sets, made without benefit of aerial observation, was abandoned when only a few fish were located near the air curtain. All other sets resulted in individual catches of from 500 to 1550 bushels of herring per set.

It appeared certain that more herring could have been taken in this area resulting in a much higher total catch had operations been continued here through September. Due to the desirability of trying the gear in other areas and of spreading any benefits derived among the fishing fleet, the gear was taken elsewhere. Requests were received from fishermen in Kennebunkport and Jonesport asking that the air curtain be tried on schools in these areas. Trips were made to these areas, but in both cases storms intervened before arrival and the schools had disappeared. Therefore, Diamond Island Roads remained the only location where fishing trials were made.

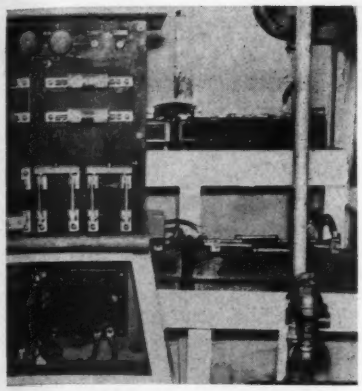
Improvements Possible

After each period of operation of the air curtain during the fall seasons of 1957 and 1958, certain improvements in the gear have been made. The latest work also showed up certain improvements and additions to the gear that would increase its efficiency. The most obvious improvement that could be made is to extend the length of the curtain. A 2400 or 3000-foot air curtain would be of much greater value in a larger number of fishing areas than one of 1200 feet. This extension could be made using the same air compressing capacity, by reducing the size of the holes in the plastic pipe from 1/32-inch in diameter to 1/64-inch in diameter. These smaller holes having only ¼ of the cross sectional area would spread a thinner air curtain over a much greater distance. Results to date indicate that a lighter air curtain of this type would probably lead herring schools and could be used to drive them if the fish were not crowded too fast.

The use of smaller holes would also permit another improvement, i.e., use of higher air pressure. They would not permit as great a loss of air volume or pressure at points nearest the air supply and at points of shallow water along the air pipe. The present gear, operating at pressures of 35 to 50 pounds per square inch, has been used at depths to 50 feet. But, higher pressure would be needed to reach greater depths. Approximately 0.44 psi pressure per foot of depth in sea water is required to equal water pressure. An additional 20 to 25 psi is required to force a good stream of air from the holes. The total pressure required to set up an air curtain at a depth of 50 feet is about 45 psi. Correspondingly more pressure is needed at greater depths. For use on a bottom of varying depth, the holes must be small and pressures relatively high to prevent loss of a large volume of air from shallow spots where opposing water pressure is low. Such loss of pressure causes skips in the curtain and entry of sea water into the pipe at deeper points where opposing water pressure is high. A system using air pressure of 80 to 100 psi and air holes of 1/64-inch would eliminate this problem in most stop seining areas.

The operations have shown a need for a better system of weighting the air pipe. It appears that this might be accomplished by attaching a fibre or wire rope along the air pipe and securing weights to the rope. A wire rope of sufficient diameter would, by its own weight, sink the pipe. A lead-cored, manila-hemp rope is available which would also serve this purpose. Such a rope would eliminate the danger of parting or cutting the plastic pipe when towing it.

Due to the large amount of heat generated when operating at higher pressures, (35 psi and above) a water-cooled air receiver or after-cooler is needed to prevent heating and consequent rupturing of the polyethylene pipe. Any system designed for use in water deeper than 30 feet should include some air cooling gear unless a different type of pipe is used.



The 32-volt Mule batteries and switchboard on the "Cap'n Bill III" of Woods Hole, Mass.

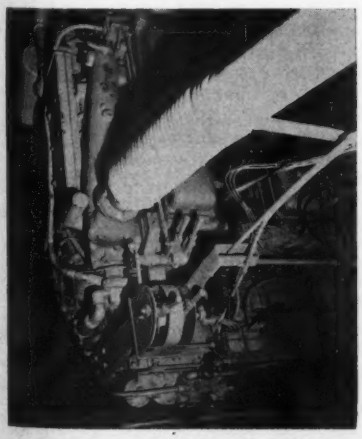
Dragger "Cap'n Bill III" Treated Against Rust

(*Continued from page 12*)

which gave her a speed of 11.2 knots under light condition. Furnished by Hubbs Engine Co., Boston, the engines have a combined output of 295 hp. at 1800 rpm., and drive a 62 x 50, 3-blade Columbian propeller through a common gear box with 6:1 reduction. Maxim silencers and Goodrich Cutless rubber stern bearing are used.

The boat has two sets of 32-volt MM-21 Mule batteries for engine starting, lighting and general ship supply. The auxiliary 110-volt A.C. generating unit is powered by a General Motors Diesel, and pumps are of Jabsco make.

Other equipment aboard the new dragger includes #652 Hathaway winch, Shipmate galley range, Buell horn, Carlisle & Finch searchlight, White compass, Raytheon Pathfinder radar, Raytheon Model 60A radio telephone, and Raytheon-Atlas fish finder.



Looking down on the General Motors 6-71 Twin Diesel in the steel dragger "Cap'n Bill III".

Designed and Built by BLOUNT

Hallmark of the finest in naval architecture and construction!

The "Cap'n Bill III" first 80-ft. **steel** dragger and the largest **molded** hull to be turned out by BLOUNT is shown above. Built for groundfish operations, the "Cap'n Bill" has many new innovations, including a specially designed contoured skeg and the use of a rubber-asphalt rust-preventing compound. She was built for Capt. Henry W. Klimm, of Hyannis, Mass., who returns to the groundfish fleet with this vessel.

This design is just one example of the ingenuity of our staff in meeting the specific commercial vessel needs. We are always available for design, consultation or modification of design of any type vessel.

Blount Marine Corporation

Warren, Rhode Island — CHerry 5-8300

Another Twin GM Supplied By HUBBS

for Captain Henry Klimm's

CAP'N BILL III

New Bedford's newest dragger . . .

The great success that Captain Henry Klimm had with his GM Twin in "Cap'n Bill II" convinced him that the GM Twin was the "only" engine for his new boat "Cap'n Bill III". Hubbs Engine Company is proud to be distributor for dependable GM Diesels, and to have supplied Captain Kiimm with another GM Twin.

HUBBS Engine Company

1168 COMMONWEALTH AVENUE, BOSTON 34, MASS.
BEacon 2-1322

Branch: 141 Main St., South Portland 7, Me., SPruce 4-3466

EQUIPMENT and SUPPLY NEWS

Linen Thread Co. Operations Being Centralized at Blue Mountain, Ala.

Production and administrative facilities of The Linen Thread Co., Inc. are being centralized at Blue Mountain, Ala., as part of a program to bring a wider scope to its operations, according to James E. Robison, president of the parent company, Indian Head Mills Co., Inc. Robison revealed that The Linen Thread Co. is realigning its top management, strengthening its sales organization, concentrating its warehouse stocks in strategic centers throughout the country, and planning to inaugurate totally new merchandising concepts.

The recently acquired subsidiary of Indian Head Mills, will continue to feature those products for which it has become known all over the world, including cotton and synthetic fishing twines, nettings, and accessories.

Realignment of top personnel was prompted by the growing importance of marketing activities in industry. D. L. Malcolm, Jr. has been named vice president and general manager of the company. Howard C. Johnson, former Chicago branch manager, has been named sales manager. R. Stewart Jenkins has been moved from assistant sales manager to merchandise manager. E. V. Vierling will head the sales service department, and Walter J. Marr has been named controller. All executives will make their headquarters at Blue Mountain. R. C. Moyer will continue as manager of the Blue Mountain plant.

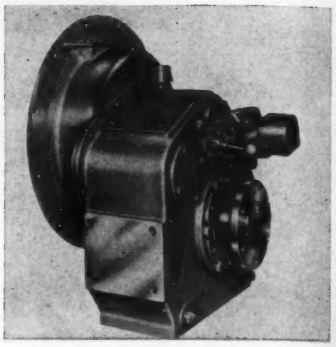
The merchandising and sales service departments are innovations at The Linen Thread Co. Operating from the company's Blue Mountain plant, these departments will assume the responsibilities of the branch sales offices and work in close liaison with the production department in meeting customer requirements.

Hobbs Marine Hour-Meter

A marine hour-meter has just been introduced by the John W. Hobbs Corp., Springfield, Ill., a division of Stewart-Warner Corp. It is specifically designed for marine installation and indicates total running time of powered craft. It provides an accurate record of hours of use and tells when maintenance is due. The meter can also be used to determine fuel consumption.

The Hobbs marine hour meter can be used on any inboard engine with battery ignition. It may also be installed on any outboard motor equipped with a battery start. Both 6 and 12-volt models are available.

New MGD Exide-Ironclad battery for marine service packs up to 58 percent more electrical power in a given space. The test equipment shows the MGD-19 with electrical capacity equal to MVD-25 concentrated into a smaller space. The MGD unit requires about 1 cubic foot less space.



Snow-Nabstedt reverse-reduction gear 3941 features fewer moving parts, light weight, and compact design. It has a maximum torque of 640 ft-lbs. for continuous operation.

New Snow-Nabstedt Reverse-Reduction Gear

The Snow-Nabstedt Gear Corp., Welton St., Hamden, Conn., has announced a new model in the 3900 series of hydraulically actuated marine reverse-reduction gears. The new 3941 gear has been engineered to meet the demands of high speed Diesel engines and for either propeller or engine rotation, with speeds up to 2400 rpm.

Advantages to engine builders and boat owners are fewer moving parts, lighter weight for its transmitted hp., and compact design. Complementing the 3900 series, the 3941 has a maximum torque of 640 foot-pounds, for continuous operation (or 265 hp. at 2200 rpm.) and 750 foot-pounds for intermittent or light operation. It can be operated continuously at full power in either forward or reverse at all engine speeds. The unit is offered at present with reduction ratios up to 4.4:1.

Universal Strut From Columbian Bronze

A new strut, manufactured by the Columbian Bronze Corp., Freeport N. Y., may be adjusted to fit any boat. It is made of "electralloy" bronze, the same material used in Columbian propellers. The strut is available for shafts of ⅞", 1", 1⅛", and 1¼". The strut comes in two pieces, ready to assemble and installed on the boat. It is fully machined and ready for bearing installation.

New Exide MGD Marine Battery Saves Weight and Space

Heavy duty storage batteries providing power capacity comparable to existing units in 27 percent less space have been introduced by Exide Industrial Division of the Electric Storage Battery Co., Rising Sun and Adams Avenues, Philadelphia 20, Pa. They are available for starting and emergency power applications on larger vessels.

In the new MGDs, Exide uses an innovation in the tubular-type positive plates, to provide more power per plate for its size. The tubes are made of continuous-filament glass fibres sheathed within a perforated polyvinyl chloride armor. They are reportedly more effective than previously-used, slotted polyethylene and rubber tubes.

The MGDs are available in two sizes, either 13 or 19 plates per cell. In contrast to its immediate predecessor, the new model provides in the same space, 58 percent more capacity at both the critical half-hour rate of discharge and the 72 hour rate. It has 48 percent more capacity at the 8-hour rate.

High electrolyte level prolongs intervals between waterings. Side reinforcing bands of the molded rubber containers provide ventilation between battery units to prevent accumulation of dirt and moisture. The new battery is equipped with quarter-turn, bayonet-type polyethylene vent plugs to prevent leakage of the electrolyte.

Morse Single Lever Engine Control

Engine control for gasoline and small Diesel engines with hydraulic reverse gears is provided by the new, Model MI, Single-Lever Engine Control manufactured by The Morse Instrument Co., 30 Clinton St., Hudson, Ohio. The control employs Morse-Action (two basic moving parts in which the gears are in constant mesh) to supply effortless, precise single-lever control to clutch and throttle.

The boat moves with the lever—forward as the lever is moved forward, and backward as the lever is moved back. Forward, neutral, and reverse positions are marked with positive dents that are recognizable by feel. A pull-out knob disconnects the clutch to allow full throttle range in starting and warm-up. The throttle closes automatically before the clutch is shifted, to safe guard reverse gears.

All-mechanical, with permanently lubricated Morse Type 33-S Tru-Lay Push-Pull Cables, the MI control head is easily installed, vertically, on the right or left side of the wheel box.

Essex Machine Works, Inc. plant and four trucks at Essex, Conn. The firm specializes in underwater marine work, including propeller reconditioning. Michigan and Federal propellers, Tobin Bronze and Monel shafts, Exide batteries, Goodrich Cutless bearings and Walter fresh water coolers are stocked.

Bludworth Marine Dealer Appointments

Bludworth Marine, 1500 Main Ave., Clifton, N. J., manufacturer and distributor of precision electronic equipment for navigation, has announced the appointment of Northwest Instrument Co., Inc., of Seattle, Wash., as a complete dealer and service agency. Operating with expanded facilities, Northwest Instrument has its new headquarters at 1403 West 45th St., Seattle.

Northwest Instrument will handle sales of Bludworth Marine products throughout Washington. In addition, they will service Bludworth Marine depth sounders and direction finders as well as radar by Kelvin Hughes, British Thompson-Houston, Cossor, Magneti Marelli and others for the account of Bludworth Marine. Bludworth products include marine radar, depth sounders, radio direction finders, and radio telephones.

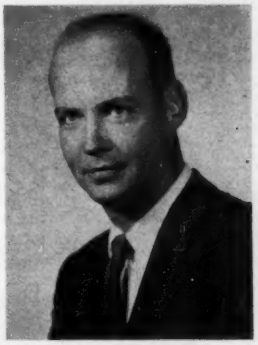
In New England, Bludworth has appointed Louis Posner Marine Radio Equipment, Inc., of Boston and Gloucester, Mass., as dealer and service agent. The Posner concern is located at 23-65 Northern Ave., Boston, and 10 Rogers St., Gloucester.

New Universal Marine Electric Plant

Designed especially for marine service, the new 3000-watt marine electric plant, Model M60-BR, has been introduced recently by the Universal Motor Co., 578 Universal Drive, Oshkosh, Wisc. The compact marine plant is powered with a two-cylinder, four-cycle, 30 cubic-inch piston displacement engine developing 6.5 hp. at 1800 rpm. Its rated capacity is 3000-3300 watts, 110-120 volt, single phase, 60-cycle ac. Radio shielding and 12-volt, remote control starting are standard equipment.

Up to 300 watts of 12-volt dc are available on the standard model for battery charging. The new model is 25⅞" long, 18¾" high and weighs 265 pounds. It is available with fully automatic controls. As an added equipment feature, it is available with a 12-volt, 24-amp dc generator especially for marine installations having a dual lighting system.

Vollendorf, Chrysler Marine Sales Manager



William M. Vollendorf

William M. Vollendorf has been named manager of marine engine sales for Chrysler Marine and Industrial Engine Division of the Chrysler Corp., Detroit 15, Mich. Vollendorf previously was advertising and sales promotion manager for the division. His new duties will include responsibility for meeting marine engine volume sales goals.

With Chrysler for 11 years, the marine and industrial division for the past eight, his activities have been varied as he handled customer relations, managed shows and exhibits, and coordinated advertising and public relations. Vollendorf will also supervise advertising for marine engines.

Aluminum Radar Target by Elk

Elk Enterprises, Inc., 5000 East Monument St., Baltimore, Md., is manufacturing a new type of folding aluminum radar target for use on small craft, bouys, and markers of all types. The unit is recommended as a safety feature for emergency use or under conditions of fog or low visibility to pin-point location on radar screens or search vessels or to avoid collision with approaching ships. It is desirable for wooden boats as they do not show up on radar screens.

White Diesel Appointments

James A. Robbins

The appointment of Hugh H. Goodwin, sales representative, has been announced by White Diesel Engine Division, The White Motor Co., Springfield, Ohio. Goodwin will assist the New York branch manager in expanded coverage of the New York area. He has 20 years experience in the Diesel engine industry and is a member of the Society of Naval Architects and Marine Engineers.

James A. Robbins, sales engineer, will be serving an expanded southeast territory for the Diesel Division, extending factory representation to all Florida, Georgia, and the Carolinas. Robbins has represented White's Superior and Atlas engines in the southeast for two years. His experience in marine sales and mechanical engineering capacities is available to engine owners, engineers, and buyers.

Fire Extinguisher Guide

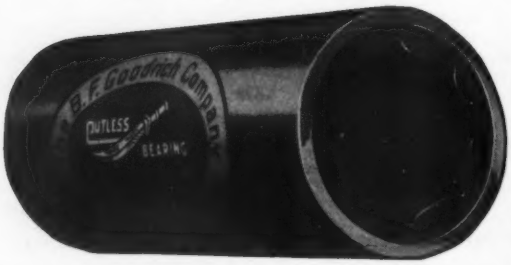
A new, six-page folder titled, "A Guide To Fire Extinguishers", has been issued by Ansul Chemical Company, Marinette, Wisc. The folder contains a table which compares the characteristics of various types of fire extinguishers. A bar graph on the last page shows the comparative effectiveness of extinguishing agents according to Underwriters' Laboratory ratings.

Cut-a-way drawings of an Ansul dry chemical extinguisher and an Ansul stored pressure water extinguisher are included. Ansul, one of the leading manufacturing of chemical fire equipment, is offering the folder without charge, through their Fire Equipment Division.

B.F.Goodrich

Cutless Bearings

For Propeller Shafts

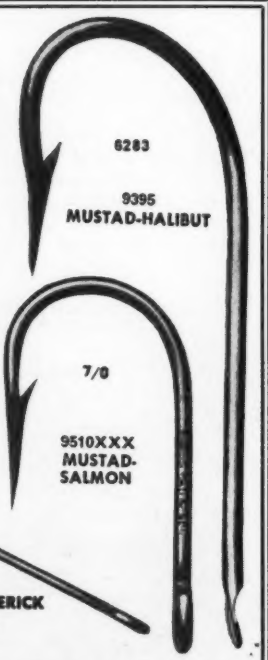


Soft rubber, water lubricated, Cutless bearings give years of trouble-free service on fishing vessels. Resist heat, oil, and wear. Quiet and protect shafts too. There is a size and type to fit your boat.

Available at Boat Repair Yards and Marine Equipment Dealers.

Lucian Q. Moffitt, Inc.
AKRON 8, OHIO
Engineers and National Distributors

QUICK, deep penetration — the ability to take hold instantly and sink in deeply — plus the enduring resilience and strength to hold your catch until you have brought it in. That's what Mustad Key Brand Fish Hooks deliver. Ask your fishing supplies dealer.



O. MUSTAD & SON
Established 1832
OSLO NORWAY
Sales Agents
Ed. W. Simon Co., Inc.
320 Broadway, New York 7
H. L. Bowlds & Son
2345 W 3rd St. 17070 Hamlin Rd.
Los Angeles 57 Seattle 55

MUSTAD
Key Brand FISH HOOKS

National Fisheries Convention

(*Continued from page 11*)

to a great variety of fish, shellfish, and wildlife. Changes in this habitat may jeopardize the continued existence of species which spend part or all of their lives in these areas. Conversely, change might also enhance conditions for these species.

"This basic estuarine research program is still in the planning stage. In this preliminary phase, future responsibilities both State and Federal agencies are being determined. For example, the Bureau of Commercial Fisheries would be responsible for basic research in each of its spheres of interest. The work it would do when it is authorized, would involve ecology, tolerance and response studies, and inshore oceanography. Because the findings from basic research would have general application, the fisheries investigations of the Bureau of Sport Fisheries and Wildlife would be focussed on problems more specifically related to game species and would involve life history, utilization and developmental research.

"There would be a maximum pooling of the efforts of the two Bureaus so that the study of problems being covered by one Bureau would not be duplicated by the other. Although most of the early estuarine study planning has taken place in the Southeast, a similar effort is now also moving rapidly ahead through the Atlantic States Marine Fisheries Commission.

"Not only does the commercial field have a strong bond with recreational interests in the common need for knowledge, but when one group assists its own cause the other fellow benefits by the activity. It is, therefore, vitally important for both groups to work closely together and that their activities be coordinated.

"This explains why there must be a parent Fish and Wildlife Service with an Office of the Commissioner to coordinate the activities of our two Bureaus rather than to have two completely independent agencies sometimes heading in entirely different directions. This coordination is one of the Federal responsibilities."

Leffler also congratulated the menhaden operators in particular for their leadership in understanding, and in taking affirmative action in the development of sound relations among all those who have an interest in the resources.

One of the outstanding events of the convention was the presentation of the annual Fisheries Service Award to Frederick M. Bundy, Gorton's of Gloucester, Gloucester, Mass. In presenting the award, L. Vernon Drape outlined Bundy's distinguished service to the industry and pointed out that he has held practically every office available in N.F.I. With the award goes a lifetime Honorary Membership in N.F.I.

During the elections held at the New York meeting, regional vice presidents were named: Region 1—Gregory F. Sacca, Blue Sea Fish Co., Boston, Mass.; Region 2—W. Jackson Catt, W. Jackson Catt Co., Buffalo, N. Y.; Region 3—Sidney K. Opler, Florida Frozen Food Processors, Inc., Miami, Fla.; Region 4—Emanuel Stein, Stein's Fish Co., Pueblo, Colo.; Region 5—E. A. Ruthford, San Juan Fishing & Packing Co., Seattle, Wash.; and for Region 6—Arthur H. Frohman, L. H. Frohman & Sons, Chicago, Ill.

L. Vernon Drape is chairman of the Board, while chairman of the Industrial Products Committee is W. C. Lunsford, Jr., New Jersey Menhaden Products, Wildwood, N. J.

The term of the outgoing Drape administration will extend until September 1. Heretofore, officers have been relieved of their duties at the close of the convention. It is believed the new procedure will achieve a smoother transition than has been possible in the past.

The Old Timers selected John Santos Carhinas of Brownsville, Texas as the Kingfish for 1959. This year's convention came to a close with the annual presentation of awards and the yearly dinner-dance.

BOAT CATCHES

For Month of April

Hailing fares. Figure after name indicates number of trips.

GLOUCESTER (Mass.)

Acme (5)	13,500	Little Flower (7)	103,000
Agatha (1)	85,000	Magnolia (2)	290,000
American Eagle (4)	168,500	Margaret Marie (7)	9,500
Anna Guarino (11)	10,500	Marianna II (5)	81,500
Anthony & Josephine (6)	9,500	Mary Ann (4)	166,000
Ave Maria (3)	14,000	Mary Rose (2)	213,000
		Metacomet (2)	26,000
Baby Rose (3)	258,000	Morning Star (7)	81,000
Blue Waters (2)	198,000		
Bonaventure (2)	130,000	Nancy & Maria (9)	9,500
Bonnie Bill (10)	18,000	Natale III (5)	162,500
Cape Cod (12)	29,000	Olympia (4)	149,000
Cigar Joe (6)	83,000		
Clinton (8)	10,500	Philip & Grace (1)	90,000
Curlew (2)	150,000	Pilgrim (1)	106,000
Dawn (7)	11,500	Raymonde (1)	17,000
Dolphin (1)	60,000	Regina Maria (3)	272,000
Doris F. Amero (3)	77,000	Rosalie S. (2)	47,000
		Rose & Lucy (4)	107,000
Eagle (1)	155,000	Rosemarie (4)	133,000
Emily H. Brown (2)	260,000	Rosie & Gracie (4)	43,500
Eva II (6)	10,000		
		St. Anna Maria (8)	90,000
Flo (1)	180,000	St. Cabrini (6)	147,000
Frances R. (6)	71,500	St. John (8)	11,000
		St. Joseph (5)	108,000
Gaetano S. (2)	76,500	St. Mary (11)	112,000
Gloucester (1)	110,000	St. Peter (3)	131,000
Golden Dawn (6)	7,500	St. Peter III (7)	136,500
Grace & Salvatore (3)	280,000	St. Providenza (11)	22,500
		St. Rosalie (4)	72,000
Holy Family (2)	185,000	St. Stephen (1)	500
Holy Name (1)	11,000	St. Terese (5)	148,500
		St. Victoria (1)	98,000
Ida & Joseph (5)	237,000	Salvatore & Grace (6)	170,000
Immaculate Conception (5)	94,500	Sandra & Jean (4)	86,000
Irma Virginia (1)	4,000	Santa Lucia (1)	1,000
		Sebastiana C. (6)	223,500
Jackie B. (7)	111,000	Serafina N. (5)	149,000
Jackson & Arthur (4)	5,000	Serafina II (6)	185,000
J.B.N. (3)	75,000	Sunlight (1)	84,000
Jennie & Lucia (5)	102,000		
Joseph & Lucia (1)	115,000	Theresa M. Boudreau (1)	150,000
Joseph S. Mattos (1)	100,000		
Judith Lee Rose (1)	196,000	Villanova (2)	330,000
		Vincie N. (3)	38,500
Kingfisher (2)	420,000	Virginia Ann (6)	72,000
Lady of the Rosary (5)	103,000	Wild Duck (3)	209,000
Linda B. (9)	14,500		

BOSTON (Mass.)

Agatha (1)	41,800	Mother Frances (3)	158,700
Agatha & Patricia (3)	244,800		
Arlington (3)	442,700	Nautilus (3)	189,500
Atlantic (2)	256,700	New Star (2)	254,900
		Notre Dame (3)	108,000
Bay (3)	302,200		
Bonnie (3)	390,800	Ohio (2)	275,500
Brighton (3)	239,300	Olympia La Rosa (3)	118,300
Buzz & Billy (3)	77,700		
		Pam Ann (2)	224,500
Cambridge (2)	381,200	Patty Jean (2)	313,500
Carmela Maria (2)	17,700	Phantom (2)	402,000
Carmen & Vince (3)	139,300	Philip & Grace (1)	94,500
Charlotte M. (2)	145,000	Pilgrim (1)	114,000
Clipper (3)	135,700	Plymouth (3)	246,800
Columbia (1)	83,800	Princess (2)	16,000
Comet (2)	241,700	Puritan (2)	149,100
Eagle (1)	117,700	Racer (2)	348,100
Estrela (1)	114,700	Raymonde (2)	184,500
Ethelena (3)	108,700	Red Jacket (3)	556,000
		Rosie (1)	11,100
Flying Cloud (2)	477,000	Rush (2)	250,000
Four (1)	42,700	Rosa B. (1)	124,000
Geraldine & Phyllis (2)	117,800	St. Angelo (4)	136,100
		St. Marco (2)	114,100
Hazel B. (3)	235,400	St. Nicholas (3)	305,700
		St. Victoria (2)	134,000
Jane B. (2)	223,300	San Calogero (1)	3,000
J. B. Junior (3)	330,000	Sant' Antonio II (1)	12,200
Jeanne D'Arc (1)	39,200	Santa Rita II (1)	7,600
John G. Murley (1)	71,000	Star of the Sea (3)	146,100
Joseph & Lucia (2)	239,800	Swallow (2)	290,100
Josephine F. (1)	9,900		
Josephine P. II (3)	62,200	Terra Nova (2)	268,100
		Texas (2)	126,000
Leonard & Nancy (2)	80,100	Thomas D. (3)	146,000
		Thomas Whalen (3)	365,400
Magellan (1)	22,200		
Manuel F. Roderick (3)	218,800	Villanova (4)	119,700
Mary & Joan (3)	234,600	Weymouth (2)	320,000
M. C. Ballard (2)	170,000	Wm. J. O'Brien (3)	403,600
Medan (2)	294,500	Winchester (3)	384,800
Michigan (3)	347,100	Wisconsin (2)	386,000
Minnie (3)	442,200		

Fass

wholesalers of

CHESAPEAKE BAY and
ATLANTIC OCEAN
FRESH CAUGHT FISH

all size shipments---rough, dressed, filleted
ocean and bay seasonal varieties

ISAAC FASS, inc.
PORTSMOUTH, VA. Call EX 7-3463

FISH WITH
FITLER ROPE

IT SERVES THE FISHERMAN'S EVERY NEED

Manila Rope Net Rope Anchor Lines
Buoy Rope Purse Lines Pot Warp

"Stabilized" Filament and Spun Nylon and Dacron Rope
Filament and Spun Nylon Seine Twine, Polyethylene Rope

THE EDWIN H. FITLER CO.
Est. 1804
PHILADELPHIA 24, PA.

ESSEX MACHINE WORKS, INC. MARINE MACHINISTS

PROPELLER RECONDITIONING

MICHIGAN Propellers Up To 30" In Stock

MONEL and TOBIN BRONZE SHAFTING

Distributors of Dependable MARINE HARDWARE

Specialists in Underwater Machine Work

ESSEX MACHINE WORKS, INC.
Essex, (Tel. South 7-8221) Conn.

New fast acting penetrant and rust solvent . . . saves time, trouble, money and tempers. Available in pressurized cans or regular pints and gallons.

SPRAY PRODUCTS CORPORATION

P. O. Box 844 • Camden 1, New Jersey

KOHLER

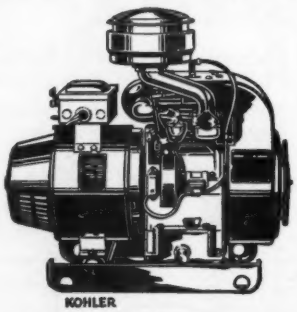
ELECTRIC PLANTS

Give You

CONSTANT

INDEPENDENT

POWER



AUTOMATIC STAND-BY CURRENT

Available with Remote Pilot House Control

Ideal for providing steady, constant voltage for operating radar and other electronic equipment

Complete Marine Electronic Sales & Service

BENDIX • LAVOIE • MUNSTON • RCA
RAY JEFFERSON • SONAR • SPERRY

THE HARRIS CO.

188 Commercial St. Telephone SPruce 4-1401

PORTLAND, MAINE

NEW BEDFORD (Mass.)

Adventurer (3)	94,000	Major J. Casey (2)	37,500
Althea (3)	42,000	Malvina B. (2)	12,900
Anastasia E. (2)	36,000	Marie & Katherine (2)	44,900
Annie Louise (3)	38,000	Mary E. D'Eon (3)	94,900
		Mary J. Landry (3)	51,800
Barbara M. (4)	94,500	Mary Tapper (4)	146,500
		Midway (2)	94,800
Capt. Bill II (3)	128,700	Miriam A. (2)	81,000
Capt. Deebold (3)	53,300	Molly & Jane (3)	47,900
Carl Henry (3)	124,000	Monte Carlo (2)	79,700
Carol & Estelle (3)	79,200		
Catherine & Mary (3)	76,500	Nancy L. (2)	28,700
Charles E. Beckman (4)	52,900	North Sea (1)	17,000
Christina J. (1)	38,600		
Christine & Dan (3)	62,500	Phyllis J. (3)	38,000
Comber (3)	17,400	Pauline H. (2)	141,000
Connie F. (2)	24,700	Porpoise (1)	15,700
Eugene H. (1)	15,500	Richard Lance (2)	28,500
		Roberta Anne (3)	71,900
Falcon (3)	84,600	Robert Joseph (2)	52,600
Friendship (3)	133,300	Rosemarie V. (1)	14,000
		Rush (4)	158,700
Gannet (2)	87,100		
Growler (3)	114,100	Sea Gold (2)	27,000
		Shannon (4)	57,500
Harmony (3)	53,900	Sharon Louise (4)	89,700
Hope II (2)	24,700	Smilyn (1)	13,000
		Solveig J. (3)	175,300
Invader (3)	106,000	Stanley B. Butler (2)	129,000
		Sunapee (1)	9,500
Jacintha (3)	170,800	Sunbeam (2)	39,500
Janet & Jean (2)	44,500	Susie O. Carver (2)	29,300
John G. Murley (2)	80,600		
Julia DaCruz (2)	34,400	Theresa (1)	16,500
		Theresa & Jean (3)	143,100
Katie D. (3)	171,200		
Kelbarsam (1)	5,000	Valiant Lady (2)	28,200
		Venture I (2)	85,500
Laura A. II (3)	129,300	Viking (3)	37,200
Libby (3)	130,900	Villa-Riall (2)	42,000
Lorine III (2)	26,600		
Louis A. Thebaud (3)	51,500	Whaler (3)	163,700
Lubenray (1)	16,300		

New Bedford Scallop Landings (Lbs.)

Abram H. (2)	14,200	Kingfisher (2)	22,400
Adele K. (3)	29,400		
Aloha (3)	33,600	Lauren Fay (2)	22,400
Alpar (2)	19,500	Lillian B. (3)	26,600
Amelia (3)	24,000	Linus S. Eldridge (3)	33,600
		Lubenray (1)	11,200
Babe Sears (2)	12,200	Louise (3)	33,600
Baltic (2)	22,200		
Barbara & Gail (2)	23,200	Malene & Marie (2)	22,400
B. Estelle Burke (2)	22,400	Mary Ann (2)	22,200
Bobbie & Harvey (2)	21,200	Mary J. Hayes (2)	22,400
Brant (2)	22,400	Moonlight (3)	33,600
Bright Star (2)	22,400		
		New Bedford (3)	33,600
Camden (3)	33,600	Newfoundland (2)	22,400
Catherine B. (2)	23,200	Noreen (2)	22,400
Catherine C. (2)	22,400		
Charles S. Ashley (3)	23,600	Pearl Harbor (2)	22,800
Clipper (2)	22,400	Pelican (3)	33,600
		Polaris (3)	22,200
Dartmouth (3)	36,000		
Debbie Jo-Ann (3)	33,600	Ruth Lea (3)	33,600
		Ruth-Moses (3)	33,600
Edgartown (3)	34,600		
Eleanor & Elsie (3)	32,400	Sandra & Jean (1)	12,200
Elizabeth N. (2)	22,400	Sandra Jane (2)	22,400
		Sea Ranger (2)	22,400
Fairhaven (3)	33,600	Sippican (3)	33,600
Flamingo (3)	33,600	Snoopy (3)	33,600
Fleetwing (3)	33,600	Stanley M. Fisher (3	33,600
Florence B. (2)	23,700	Stephen R. (2)	20,500
Florence Lee (3)	33,600		
		Ursula M. Norton (4)	36,100
Geraldine (3)	33,600		
		Vivian Fay (3)	33,600
Hilda Garston (3)	33,600		
		Whaling City (3)	23,500
Jerry & Jimmy (2)	23,400		
Josephine & Mary (2)	23,200		

PORTLAND (Me.)

Agnes & Elizabeth (3)	78,000	Mary & Helen (3)	5,500
Alice M. Doughty II (4)	125,000	Mary & Jennie (4)	24,000
Alton A. (4)	15,500	Mascot (3)	3,300
Andarte (3)	175,000	Ocean Life (1)	280,000
Ariel (2)	6,500	Quincy (1)	205,000
Bois Bubert (1)	5,000	Rosalie S. (1)	3,000
Cathy-Aldie (3)	10,000	St. George (1)	105,000
Courier (3)	246,000	St. Michael (4)	5,700
Dorchester (2)	145,000	Sandra Jean (1)	2,000
Dorothy & Ethel (1)	22,000	Surfman (2)	7,000
Elinor & Jean (4)	53,000	Theresa R. (3)	230,000
Gulf Stream (2)	205,000	Vagabond (2)	33,500
Helen S. (2)	3,000	Vandal (5)	213,000
Joan M. (2)	2,500	Vida E. II (4)	8,300
Lawrence Scola (3)	22,000	Vincie N. (1)	18,000
Lucille B. (3)	15,700	Wawenock (2)	343,000
Mary (1)	3,000	Winthrop (1)	60,000

Scallop Landings (Lbs.)

Sylvester F. Whalen (2)	22,000

WOODS HOLE (Mass.)

Arnold (3)	26,800	Kelbarsam (1	1,900
Bernice (4)	21,300	Lizboa (1)	1,500
Cap'n Bill II (1)	6,100	Lynn (1)	10,200
Cap'n Bill III (1)	28,500	Madeline (2)	10,400
Carib (1)	3,600	Medric (1)	2,400
Carole Ann (2)	15,400	Morning Star (2)	4,600
Driftwood (5)	17,600	Reliance (2)	7,600
Falcon (1)	900	Richard Lance (1)	10,200
Frankie & Jeanne (2)	13,300	Roann (4)	40,000
Gertrude D. (3)	13,200	Roberta Ann (1)	900
Harmony (1)	7,800	Southern Cross (4)	19,900
Intrepid (2)	5,000	Three Bells (3)	20,900
Janet & Elise (2)	7,000	Viking (4)	13,700

SEATTLE (Halibut Fleet Fishery)

Aloma (1)	75,000	PacificWave (1)	115,000
Attu (1)	63,000	Platinum (1)	42,000
Chelsea (1)	45,000	Polaris (1)	65,000
Eclipse (1)	62,000	Recruit (1)	125,000
Flying Tiger (1)	57,000	Satrania (1)	70,000
Kaare (1)	106,000	Seafarer (1)	80,000
Lucky Star (1)	46,000	Seattle (1)	88,000
Masonic (1)	60,000	Silver Viking (1)	85,000
New Queen (1)	85,000	Thor (1)	57,000
Nordby (1)	55,000	Vansee (1)	85,000
Pacific (1)	64,000	Western Girl (1)	115,000

NEW YORK

Andrea G. (3)	250,000	Golden Eagle (4)	242,600
Austin W. (2)	102,400	Lady of Good Voyage (3)	194,400
Carol Jack (1)	50,000	Manuel P. Domingoes (2)	88,900
Edith L. Boudreau (2)	113,800	Santa Maria (2)	108,500
Evelina M. Goulart (3)	190,200	Tina B. (2)	134,400

Scallop Landings (Lbs.)

Beatrice & Ida (2)	22,000	Felicia (3)	32,000
Carol Jack (2)	22,000	Karina T. (1)	3,200
David A. (3)	33,000	Muskegon (1)	7,500
Enterprise (2)	22,000	Norseman (3)	32,100

ROCKLAND (Me.)

Angie & Florence (1)	35,000	Louise G. (4)	65,000
Araho (3)	255,000	Mabel Susan (4)	58,500
Elin B. (4)	130,000	Ocean (2)	520,000
Ethel B. (1)	1,300	Squall (1)	320,000
Flo (4)	157,500	Storm (2)	570,000
Helen Mae II (4)	88,000	Surf (2)	560,000
John J. Nagle (2)	170,000	Tide (1)	260,000
Little Growler (3)	108,500	Wave (1)	300,000

Scallop Landings (Lbs.)

Pocahontas (2)	22,000

Writes Booklet on Oyster Farming

Robert S. Bailey has written a booklet "Let's be Oyster Farmers". It is designed to give oyster farmers basic information about oyster culture, and suggests ways in which oystermen may become their own scientists. The booklet is published by Division of Planning and Economic Development, State Office Bldg., Richmond 19, Va. Mr. Bailey is information officer at the Virginia Fisheries Laboratory.

In the booklet Bailey states that oyster growers and consumers both would benefit if demand were shifted to smaller sizes, because growers could harvest the crop a year or more earlier than now and get higher yields.

Marine Electronics Handbook

A new and comprehensive source of up-to-date information about marine electronic equipment in general has been written by Leo G. Sands and published by Howard W. Sams & Co., Inc., 2201 East 46th St., Indianapolis 6, Ind. The "Marine Electronics Handbook", has been written for the boat owner as well as the technician.

Subjects cover how to select, install, use, and maintain: radio telephones, shipboard sound and intercom systems, direction finders, depth recorders, electronic steering gear, radar, power supplies, etc. Also considered are operating procedures and regulations for marine electronics gear.

Sands career in electronics began in 1928. He has worked for Bendix Radio Division, Bogue Electric Mfg. Co. A radar maintenance foreman during the war, Sands has served as marketing executive concerned with special applications of radio communications for RCA. He is a senior member of the Institute of Radio Engineers.

Be on guard with
CHANNELGARD

Maintain continuous listening watch on 2182 kc. Calling and Distress Channel even with your R/T tuned to another channel. Fits any R/T.

See it at your dealer or write for free folder.

SESCO, INC.

Friday Harbor, Washington.

NETS • RAKES • TONGS

Bait Netting - Wire Baskets
Rope - Lobster Pot Heading Twine - Corks

LARGE STOCK

Prompt, intelligent, personal attention to your order

W. A. AUGUR, Inc.

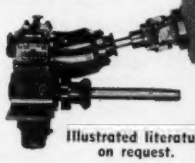
54 Beekman Street New York 38, N. Y.
BEekman 3-0857

Walter V-Drives FOR ALL ENGINES — BOATS

MODERN BOAT PROPULSION

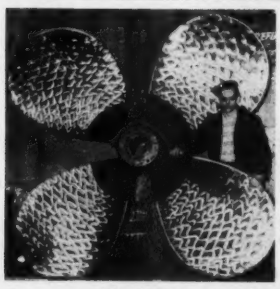
Quiet operation.
Saves valuable cabin space.
Various ratios and sizes for all gas and diesel engines.

Makers of:
Clean-Flo Keel Coolers
Reduction Gears
Transfer Drives



Illustrated literature on request.

THE WALTER MACHINE CO., Inc.
84 Cambridge Ave., Jersey City 7, N. J.



HASKELL & HALL, INC.

Warehouse Distributors for
Columbian Bronze Propellers

Complete Stock of Propellers, Shafting, Bearings, Jabsco Pumps, etc.

Expert Reconditioning by Factory Trained Workmen.

Our shop is fully equipped to handle any of your marine problems.

We are ready to assist you

No job is too big or too small at
HASKELL & HALL, Inc.

36 Webb St. Tel. Pioneer 4-3806 Salem, Mass.

WHERE-TO-BUY DIRECTORY

ADHESIVES
Glass Plastics Corp., 1605 W. Elizabeth Ave., Linden, N. J.

ANCHORS
Danforth Anchors, 2121 Alliston Way, Berkeley, Calif.
"Northill": Air Cruisers Div., Garrett Corp., Belmar, N. J.

ANTIBIOTICS
American Cyanamid Co., 30 Rockefeller Plaza, New York 20, N. Y.
Chas. Pfizer & Co., Inc., 630 Flushing Ave., Brooklyn 6, N. Y.

BATTERIES
Bowers Battery & Spark Plug Co., Box 1262, Reading, Pa.
Crescent Battery & Light Co., Inc., 819 Magazine St., New Orleans 12, La.
Exide Industrial Division—The Electric Storage Battery Co., P. O. Box 8109, Rising Sun & Adams Aves., Philadelphia 20, Pa.
Mule Battery Mfg. Co., 45 River Ave., Providence 8, R. I.
Surrette Storage Battery Co., Salem, Mass.

CANS
Continental Can Co., 100 E. 42nd St., New York, N. Y.

CLOTHING
A. J. Tower Co., 24 Simmons St., Boston, Mass.
United States Rubber Co., Rockefeller Center, New York, N .Y.

COLD STORAGE
Quaker City Cold Storage Co., Philadelphia, Pa.

COMPASSES
John E. Hand & Sons Co., Atlantic & Washington Avenues, Haddonfield, N. J
Marine Compass Co., Pembroke, Mass.
E. S. Ritchie & Sons Inc., Pembroke, Mass.
Wilfrid O. White & Sons, Inc., 178 Atlantic Ave., Boston 10, Mass.

CORDAGE
Bob Stone Cordage Company, Chariton, Iowa.
Cating Rope Works, Inc., Maspeth, N. Y.
Columbian Rope Co., Auburn, N. Y.
The Edwin H. Fitler Co., Philadelphia 24, Pa.
New Bedford Cordage Co., 131 Court St., New Bedford, Mass.

DEPTH SOUNDERS
Bendix Aviation Corp., Pacific Div., 475 Fifth Ave., New York 17, N. Y.
Edo Corporation, College Point, L. I., N. Y.
Radiomarine Products, a Division of RCA, 75 Varick St., New York 13, N. Y.
Raytheon Manufacturing Co., 138 River St., Waltham 54, Mass.
Wilfrid O. White & Sons, Inc., 178 Atlantic Ave., Boston 10, Mass.

DIESEL TESTING EQUIPMENT
Kiene Diesel Accessories, Inc., 10352 Pacific Ave., Franklin Park, Ill.

DIRECTION FINDERS
Bludworth Marine, 1500 Main Ave., Clifton, N. J.
Radiomarine Products, a Division of RCA, 75 Varick St., New York 13, N. Y.
Raytheon Manufacturing Co., 138 River St., Waltham 54, Mass.

ELECTRIC GENERATING PLANTS
D. W. Onan & Sons, Inc., University Ave., S.E. at 25th, Minneapolis 14, Minn.

ENGINES—Diesel
Allis-Chalmers, Buda Division, 1135 S. 70th St., Milwaukee 1, Wisc.
American MARC Inc., 1601 W. Florence Ave., Box 549, Inglewood, Calif.
Burmeister & Wain American Corp., Lathrop Engine Div., Mystic, Conn.
Caterpillar Tractor Co., Peoria, Ill.
Cummins Engine Co., Columbus, Ind.
Detroit Diesel Engine Div., General Motors Corp., 13400 W. Outer Drive, Detroit 28, Mich.
Enterprise Engine & Machinery Co., 18th and Florida Sts., San Francisco 10, Calif.
Fairbanks, Morse & Co., Chicago, Ill.
Ford Marined Engines, Osco Motors Corp., 3627 N. Lawrence St., Philadelphia 40-AF, Pa.
Gray Marine Motor Co., 646 Canton Ave., Detroit, Mich.
Hercules Motors Corp., 101 Eleventh St., S.E., Canton, Ohio
Lister-Blackstone, Inc., 42-32 21st St., Long Island City 1, N. Y.
H. O. Penn Machinery Co., Inc., East River and 140th St., New York, N. Y.
Perkins Machinery Co. Inc., Exit 53 Route 128, Needham Hts., Mass.; 4 Water St., Fairhaven, Mass.
Petter Engine Div., Orenda Industrial, Inc., 34-14 58th St., Woodside 77, N. Y.
Red Wing Marine Corp., Red Wing, Minn.
Waukesha Motor Co., Waukesha, Wisc.
White Diesel Engine Division, White Motor Co., Springfield, Ohio.
Wolverine Marine Dept., The Coulter & McKenzie Machine Co., 35 Union Ave., Bridgeport 3, Conn.

ENGINES—Gasoline
Burmeister & Wain American Corp., Lathrop Engine Div., Mystic, Conn.
Marine Engine Division, Chrysler Corp., 12200 E. Jefferson Ave., Detroit 15, Mich.
Ford Marined Engines, 3627 N. Lawrence St., Philadelphia 40-AF, Penna.
Gray Marine Motor Co., 646 Canton Ave., Detroit, Mich.
Norseman Marine, 105 Nevada St., Oshkosh, Wisc.
Red Wing Marine Corp., Red Wing, Minn.

ENGINES—Outboard
Evinrude Motors, 4670 N. 27 St., Milwaukee 16, Wis.
Johnson Motors, 6300 Pershing Rd., Waukegan, Ill.

FISH KNIVES
R. Murphy Co., Ayer, Mass.

FISHING GEAR
The Harris Co., Portland, Me.
Marine Construction & Design Co., 2300 Commodore Way, Seattle 99, Wash.
Westerbeke Fishing Gear Co., Inc., Fish Pier Road, Boston 10, Mass.

FLARE SIGNALS
Kilgore Inc., International Flare Signal Div., Westerville, Ohio

FLEXIBLE HOSE LINES
Aeroquip Corp., 300 South East Ave., Jackson, Mich.

FLOATS
Dale Plastics Corp., 5736 12th St., Detroit 8, Mich.
J. H. Shepherd Son & Co., Elyria, Ohio.
B. F. Goodrich Sponge Products Division, Shelton, Conn.
The Linen Thread Co., Inc., 418 Grand St., Paterson 1, N. J.

GENERATING SETS
Allis-Chalmers, Buda Division, 1135 S. 70th St., Milwaukee 1, Wisc.
Winpower Mfg. Co.. Newton, Iowa

GENERATORS
Safety Industries, Inc., Box 904, New Haven 4, Conn.
Winpower Mfg. Co., Newton, Iowa

HOOKS
O. Mustad & Son, Oslo, Norway.
"Pflueger": Enterprise Mfg. Co., 110 Union St., Akron, Ohio.

INSULATION
"Styrofoam" (Expanded Dow Polysytrene): The Dow Chemical Co., Midland, Mich.

LIFE RAFTS
"Seafarer": Capt. A. J. Pedersen, 78 Woodmont St., Portland, Me.

LORAN
Edo Corporation, College Point, L. I., N. Y.
Radiomarine Products, a Division of RCA, 75 Varick St., New York 13, N. Y.

MOTOR GENERATORS
Safety Industries, Inc., P.O. Box 904, New Haven 4, Conn.

NETS
W. A. Augur, Inc., 54 Beekman St., New York 38, N. Y.
The Fish Net & Twine Co., Menominee, Mich.
Hope Fish Netting Mills, Inc., Hope, R. I.
The Linen Thread Co., Inc., 418 Grand St., Paterson 1, N. J.
Moodus Net & Twine, Inc., Moodus, Conn.
Joseph F. Shea, Inc., East Haddam, Conn.
A. M. Starr Net Co., 10 Summit Street, East Hampton, Conn.
Western Trawl & Supply Co., Freeport, Texas.

OIL—Lubricating
The California Oil Co., Perth Amboy, N. J.
Gulf Oil Corp., Gulf Bldg., Pittsburgh, Pa.
Socony Mobil Oil Co., Inc., Marine Sales Dept., 26 Broadway, New York 4, N. Y.
Standard Oil Co. of California, Standard Oil Bldg., San Francisco, Calif.

PAINTS
The Federal Paint Co., Inc., 33 Rector St., New York 6, N. Y.
Glass Plastics Corp., 1605 W. Elizabeth Ave., Linden, N. J.
Henderson & Johnson, Inc., Gloucester, Mass.
International Paint Co., Inc., 21 West St., New York, N. Y.
Pettit Paint Co., Belleville, N. J.
Tarr & Wonson Ltd., Gloucester, Mass.
C. A. Woolsey Paint & Color Co. Inc., 205 East 42nd St., New York 17, N. Y.

PRESERVATIVES
Robeson Preservo Co., 214 Merchant St., Port Huron, Mich.

PROPELLERS
Columbian Bronze Corp., Freeport, N. Y.
Federal Propellers, Grand Rapids, Mich.
Ferguson Propeller and Reconditioning Co., 1132 Clinton St., Hoboken, N. J.
Michigan Wheel Co., 1501 Buchanan Avenue, S. W., Grand Rapids, Mich.

PROPELLER RECONDITIONING
Columbian Bronze Corp., Freeport, N. Y.
Ferguson Propeller and Reconditioning Co., 1132 Clinton St., Hoboken, N. J.

PROPELLER REPAIRS
Columbian Bronze Corp., Freeport, N. Y.
Ferguson Propeller and Reconditioning Co., 1132 Clinton St., Hoboken, N. J.
Haskell & Hall, Inc., 36 Webb St., Salem, Mass.

PROPELLER SHAFTS
The American Brass Co., Waterbury 20, Conn.
The International Nickel Co., Inc., 67 Wall St., New York 5, N. Y.

PUMPS
Brodeur Machine Co., Inc., Pump Div., 62 Wood St., New Bedford, Mass.
Jabsco Pump Co., 2031 N. Lincoln St., Burbank, Calif.
Sudbury Laboratory, South Sudbury, Mass.

RADAR
Bendix Aviation Corp., Pacific Div., 475 Fifth Ave., New York 17, N. Y.
Decca Radar Inc., 539 West 25th St., New York 1, N. Y.
Edo Corporation, College Point, L. I. N. Y.
Lavoie Laboratories, Inc., Morganville 16, N. J.
Radiomarine Products, a Division of RCA, 75 Varick St., New York 13, N. Y.

RADIO MONITORS
Sesco, Inc., 47 Nichols Ave., Friday Harbor, Wash.

RADIO TELEPHONES
Applied Electronics Co., Inc., 213 E. Grand Ave., South San Francisco, Calif.
Bludworth Marine, 1500 Main Ave., Clifton, N. J.
Hudson American—Div. of Vocaline Company of America, Inc., Old Saybrook, Conn.
Radiomarine Products, a Division of RCA, 75 Varick St., New York 13, N. Y.

RANGES—Galley
"Shipmate"—Shipmate Stove Division, Souderton, Pa.
"Shipmate" and "Webbperfection" — Elisha Webb & Son Co., 136 S. Front St., Philadelphia 6, Pa.
Harry C. Weiskittel Co., Inc., 4901 Pulaski Highway, Baltimore 24, Md.

REDUCTION GEARS
Auto Engine Works, Inc., 333 (A) North Hamline Ave., St. Paul 4, Minn.
Paragon Gear Works, Inc., 628 Cushman St., Taunton, Mass.
Snow-Nabstedt Gear Corp., Welton St., Hamden, Conn.
Twin Disc Clutch Co., 1341 Racine St., Racine, Wis.
The Walter Machine Co., Inc., 84 Cambridge Ave., Jersey City 7, N. J.

RUST PREVENTIVES
Sudbury Laboratory, South Sudbury, Mass.

SEARCHLIGHTS
The Carlisle & Finch Co., 4562 W. Mitchell Ave., Cincinnati 32, Ohio

SHIPBUILDERS
Blount Marine Corp., Warren, Rhode Island.
Diesel Engine Sales Inc., St. Augustine, Fla.
Diesel Engine Sales of Ft. Myers, Fla., Inc., 2909 Frierson, Ft. Myers, Fla.
Harvey F. Gamage, So. Bristol, Maine.
Gladding-Hearn Shipbuilding Corp., 1 Riverside Ave., Somerset, Mass.
Story Marine Railway, 257 Front St., So. Portland, Me.

SILENCERS
The Maxim Silencer Co., 126 Homestead Ave., Hartford, Conn.

STARTING FLUID
Spray Products Corp., P. O. Box 844, Camden 1, N. J.

STERN BEARINGS
Byron Jackson Tools, Inc. 1900 E. 65th St., Los Angeles 1, Calif.
"Goodrich Cutless": Lucian Q. Moffitt, Inc., Akron 8, Ohio.

TRAWL CABLE METERS
Olympic Instrument Laboratories, Vashon, Wash.

TWINE
Brownell & Co., Inc., Moodus, Conn.
Columbian Rope Co., Auburn, N. Y.
Ross-Matthews Corp., Box 1110, Fall River, Mass.

V-BELTS
Flexible Steel Lacing Co., 4683 Lexington St., Chicago 44, Ill.

VOLTAGE REGULATORS
Safety Industries, Inc., Box 904, New Haven 4, Conn.

WINCHES
Hancock Marine, 1567 No. Main St., Fall River, Mass.
Hathaway Machinery Co., Inc., New Bedford, Mass.
Stroudsburg Engine Works, 62 North 3rd St., Stroudsburg, Penn.

WIRE ROPE
American Steel & Wire Division, United States Steel, Rockefeller Bldg., 614 Superior Ave., Cleveland 13, Ohio.
Hackensack Cable Corp., 110 Orchard St., Hackensack, N. J.
John A. Roebling's Sons Co., Trenton 2, N. J.
Wickwire Spencer Steel Division of The Colorado Fuel & Iron Corp., Palmer, Mass.

FOREIGN BAILINGS

FIRST ATOMIC FISH BOAT is planned by Japanese. Plans for building the first atomic-powered fishing vessel, for experimental purposes, were announced at the second World Fishing Boat Congress in Rome by Professor Atsushi Takagi of the Department of Naval Architecture of the Institute of Tokyo.

The vessel will have a displacement of 3,000-4,000 tons and will be powered with an American-type reactor. It will have a complement of 100. Fifty will be research experimenters.

The reactor will be installed in a container and will use as fuel 29-percent condensed dioxidized uranium. For emergency use, a 120 hp. Diesel will be installed.

Takagi said he believes that high speed fishing boats driven by reactors will be coming into general use before 1970. He also imagined that an atomic plant would enable the building of subsurface fishing boats. Further, the development of electronics will be the means of introducing superior automatic control systems. With such boats, he feels trawling may be conducted at any depth in the sea.

TO LOCATE SUBSURFACE TUNA with asdic is the plan of Norwegian researchers. During the summer of 1959, Norwegian fisheries scientists will attempt to locate subsurface tuna schools with asdic. The first objective will be to obtain clear echograms of tuna so that they can be differentiated from other fish. The Ocean Research Institute's vessel *Peder Ronestad* will be used to make the studies off Norway's west coast.

EDIBLE FISH FLOUR is to be produced on a commercial scale in Sweden. The first full-scale commercial plant for the production of edible fish flour is being built in Sweden and will come into operation this year, according to Food and Agriculture Organization reports. This development, makes a significant step forward in man's effort to produce a cheap and plentiful supply of animal protein.

The new flour can be used in making breads, cakes, pasteries, etc., and can be added to soups, sauces and other food stuffs. Already in Scandinavia, plans have been made to produce protein-enriched bread by including up to 5 percent edible fish flour in the product.

The flour is produced in a closed-circuit plant, fresh fish being fed into the plant at one end and the flour being delivered at the other. Any type of fish may be used from sharks to sprats.

SIGNIFICANT INCREASES in the keeping properties of fish have been achieved by subjecting the fish to irradiation, according to the British Department of Scientific and Industrial Research.

Samples of haddock, mackerel, herring, cod, and sole were irradiated at Harwell, England in an experiment carried out by the staff of the Torry Research Station and Low Temperature Research Station.

Cod and sole were least affected in odor and flavor by irradiation. Cod exposed to comparatively low doses of radiation were found to remain palatable for 13 days, compared with 9 for untreated fish of the same kind.

Index to Advertisers

American Cyanamid Company 22-23
American Telephone & Telegraph Co. 2
W. A. Augur, Inc. 39
Auto Engine Works, Inc. 4
Blount Marine Corp. 33
The Boston Metals Co. 42
Brownell & Co., Inc. 43
Columbian Rope Co. 1
Essex Machine Works, Inc. 37
Evinrude Motors 31
Issac Fass, Inc. 37
Edwin H. Fitler Co. 37
Harvey F. Gamage, Shipbuilder 4
Glass Plastics Corp. 6
Gray Marine Motor Company 29
The Harris Co. 38
Haskell & Hall, Inc. 39
The Heminway & Bartlett Mfg. Co. 32
Hubbs Engine Company 33
The Linen Thread Co., Inc. 8
Lister-Blackstone, Inc. 31
Wm. M. McClain, Inc. 42
Michigan Wheel Co. 30
Lucian Q. Moffit, Inc. 36
Mule Battery Mfg. Co. 32
O. Mustad & Son 36
Sesco, Inc. 39
Snow-Nabstedt Gear Corp. 7
Sponge Products Div., B. F. Goodrich Co. 3
Spray Products Corp. 38
Standard Oil Company of California 44
A. M. Starr Net Co. 28
The Walter Machine Co., Inc. 39
Westerbeke Fishing Gear Co. 42
Western Trawl & Supply Co. 42

For The Finest Shrimp-Trawls—Any Type

WESTERN TRAWL & SUPPLY COMPANY

HOME OF "WESTERN JIB" TRAWLS (U.S. PAT. 2,816,386)

FREEPORT, TEXAS

MARLON OR COTTON NETTING — ROCHESTER WIRE ROPE — NEW BEDFORD CORDAGE

BOAT & GEAR MART

Classified Advertising Rates: $1.00 per line, $5.00 minimum charge. Count 9 words to a line. Closing date, 25th. National Fisherman, Goffstown, N. H.

FOR SALE

Cruisers, draggers, auxiliaries—all types and sizes. If you are in the market for anything in that line, please write us—no inquiry too small to merit attention. KNOX MARINE EXCHANGE, CAMDEN 4, MAINE.

BOATS AND SHIPS FOR SALE AND CHARTER

Purse seiners, draggers, trollers, freezer vessels, tugs, barges, water taxis, cargo ships, tankers, passenger ships, dredges, yachts, surplus type vessels and used marine equipment. World-wide contacts. JERRY'S BOAT SALES, 310 West 7th St., San Pedro, Calif.

GOVERNMENT SURPLUS EQUIPMENT LIST

Buy surplus direct from Government at tremendous savings. Boats, motors, gear, machinery, power tools, truck jeep, hundreds others. List $1.00. Surplus Bulletin, Box 169 NAE, East Hartford 8, Conn.

FOR SALE

World War II subchaser *Lynn II* 110′ x 19′ x 7′ twin screw Burmeister & Wain 180 HP engines practically new. Fully equipped with radio telephone, direction finder, radar. Two large holds, one refrigerated. Hull and all equipment excellent condition. Formerly dragger and scalloper converted to cargo. Easily reconverted to fishing. Selling due insufficient cargo work. Perry B. Duryea & Son, Inc., Montauk, L. I., N. Y. MO8-2410.

FOR SALE

50′ Eastern Dragger, fully rigged, Radiophone, Fathometer, 6-71 Gray Marine Diesel with 3 to 1 reduction gear. New batteries, all new wiring, hold capacity 30,000. $7,500. Renato Bottero, Box 393, Dennis, Mass. Tel. Dennis 98M.

FOR SALE

145 hp. CHRYSLER ROYALS, 2:1 reduction, Unused, Surplus. $650.00. LCM: 50′ x 14′, steel, 2 G.M. 671 Diesels. $6,750. DECK BARGE: Steel, 110′ x 30′ x 8′, 1944. BOAT MOVING & HAULING CRANE: Carry up to 36′ & 25 tons. Pneumatic tires $2,950. EVEREADY SUPPLY, Bridgeport, Conn.

25 H.P. FOUR CYL. AUX. LIFEBOAT ENGINES

25 HP. @ 1428 RPM and equipped with 2.04:1 reduction gear. Bore & stroke 3⅝" X 4½"—24 volt starting—complete with fuel pump; battery charging generator; starter; lube oil cooler; lube oil filter; air cleaner; fuel oil filter; fuel transfer pump and fuel injection pump. Designed for raw water cooling. Excellent for lifeboat engine, small dorys, pleasure boats, work boats, fishing boats, etc. In good running condition. Just removed from boats by U.S. Navy.

THE BOSTON METALS COMPANY

313 E. Baltimore St. — Baltimore 2, Md. — ELgin 5-5050

NEW TWIN-DISC MARINE REVERSE AND REDUCTION GEARS—3.05:1—MG150—MODEL X8708

Fits any GM-6-71 marine engine—offered right or left hand. Buy now while you can choose. Price: $775 each, F. O. B. warehouse, Baltimore.

THE BOSTON METALS COMPANY

313 E. Baltimore St. — Baltimore 2, Md. — ELgin 5-5050

Commission Merchants and Wholesale Dealers in

ALL TYPES OF FROZEN SEAFOOD

WM. M. McCLAIN, INC.

231 S. FRONT ST. PHILADELPHIA, PA. 230 S. WATER ST.

To Sell your Boat, Engine, Gear

Use the BOAT AND GEAR MART

in National Fisherman

Rates: Only $1.00 per line; minimum charge $5.00

Send copy to NATIONAL FISHERMAN, Goffstown, N. H.

FOR SALE

Rebuilt 6DASMR844 Buda with hydraulic reverse and reduction gear 3.88-1 ratio: Model L Cummins marine Diesel, 2-1 ratio. Other units available. Western Branch Diesel, Inc., West Norfolk, Va.

WESTERBEKE FISHING GEAR CO., INC.

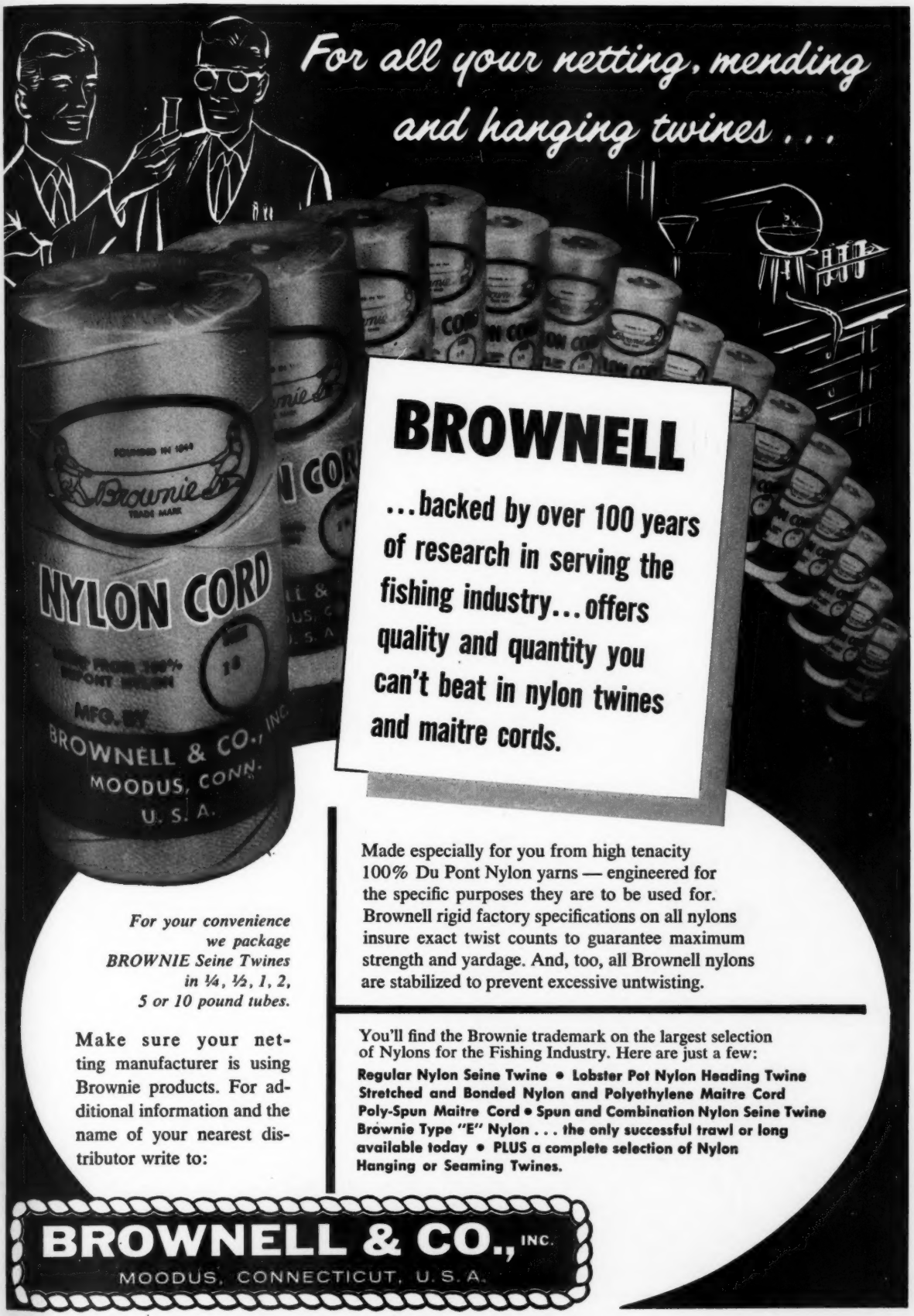
Grimsby Trawls
Wesco Cod-end Protectors
Wire and Manila ropes

— *Distributors* —

Boston 10, Mass.

Also store and warehouse Gloucester, Mass.

Marine Hardware
Danforth Anchors
Paints — Fittings



BROWNELL

. . . backed by over 100 years of research in serving the fishing industry . . . offers quality and quantity you can't beat in nylon twines and maitre cords.

Made especially for you from high tenacity 100% Du Pont Nylon yarns — engineered for the specific purposes they are to be used for. Brownell rigid factory specifications on all nylons insure exact twist counts to guarantee maximum strength and yardage. And, too, all Brownell nylons are stabilized to prevent excessive untwisting.

For your convenience we package BROWNIE Seine Twines in ¼, ½, 1, 2, 5 or 10 pound tubes.

Make sure your netting manufacturer is using Brownie products. For additional information and the name of your nearest distributor write to:

You'll find the Brownie trademark on the largest selection of Nylons for the Fishing Industry. Here are just a few:

Regular Nylon Seine Twine • Lobster Pot Nylon Heading Twine Stretched and Bonded Nylon and Polyethylene Maitre Cord Poly-Spun Maitre Cord • Spun and Combination Nylon Seine Twine Brownie Type "E" Nylon . . . the only successful trawl or long available today • PLUS a complete selection of Nylon Hanging or Seaming Twines.

BROWNELL & CO., INC.
MOODUS, CONNECTICUT, U. S. A.

ENGINEER'S FIELD REPORT

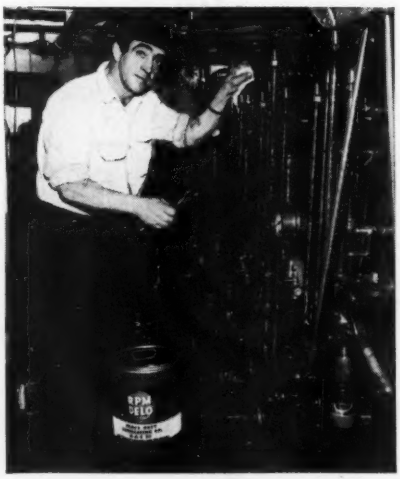
PRODUCT **RPM DELO OIL**

APPLICATION **M. V. Giuseppe-Maria San Francisco, Calif.**

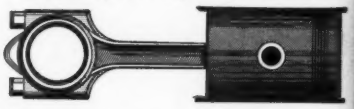
13 years on RPM DELO without major overhaul

Using RPM DELO Oil, M. V. Giuseppe-Maria's 110-hp Atlas marine diesel engine has run more than 80,000 hours without major overhaul. When engine recently was torn down for routine, periodic inspection, crankshaft showed no measurable wear, rod and main bearings were returned to service. Only piston rings, which showed normal wear, were replaced. "Rings were free and clear of carbon...so were other engine parts...and piston sleeves were unscored," reports Skipper Anthony Cresci. "She looked like new inside." 58-foot vessel hauls up to 50 tons of rock cod, flounder and other flat fish from operations along 160-mile stretch of California coast, averaging 520 hours running time monthly.

Skipper and owner Anthony Cresci (right) points to oil pressure gauge which registers a steady 25 lb. psi at normal and high speeds and 15 lb. psi while idling, indicating excellent condition of Atlas Marine Diesel. Says Mr. Cresci: "We've used nothing but RPM DELO in this engine since it was new, 13 years ago. We feel DELO is the best possible oil to use in this type of service, and the condition of the engine proves we are right." The Cresci family has used Standard products aboard their fishing boats since 1919.



Why RPM DELO Oils reduce wear—prolong engine life



- Metal-adhesion qualities keep oil on engine parts, running or idle
- Anti-oxidant resists formation of lacquer
- Detergent keeps parts clean
- Special compounds prevent corrosion of bearing metal
- Inhibitor resists foaming

For More Information or the name of your nearest distributor, write or call any of the companies listed below.

LUBRICATING OILS RPM DELO

TRADEMARK "RPM DELO" AND CHEVRON DESIGN REG. U.S. PAT. OFF.

STANDARD OIL COMPANY OF CALIFORNIA, San Francisco 20
THE CALIFORNIA OIL COMPANY, Perth Amboy, New Jersey

STANDARD OIL COMPANY OF TEXAS, El Pa
THE CALIFORNIA COMPANY, Denver 1, Colora

Maria
Calif.
aul

...so
were
"She
up to
n from
ornia
thly.

uce
e

ep oil
idle
atio

n
cor

name
write
liste

El Pa
Colora